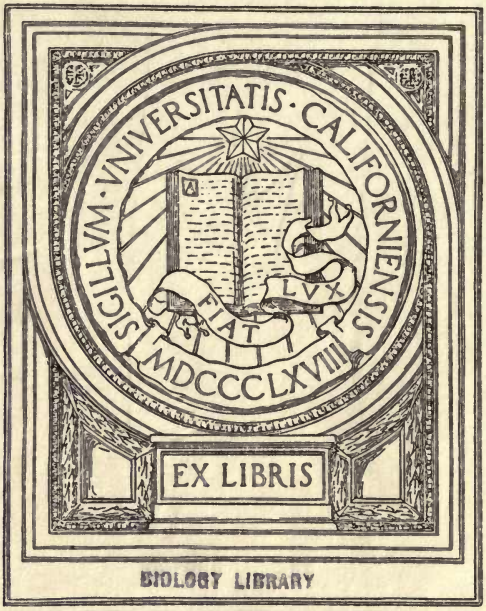
WITH NATURE AND A CAMERA

RICHARD KEARTON
F.Z.S., F.R.P.S.
& CHERRY KEARTON



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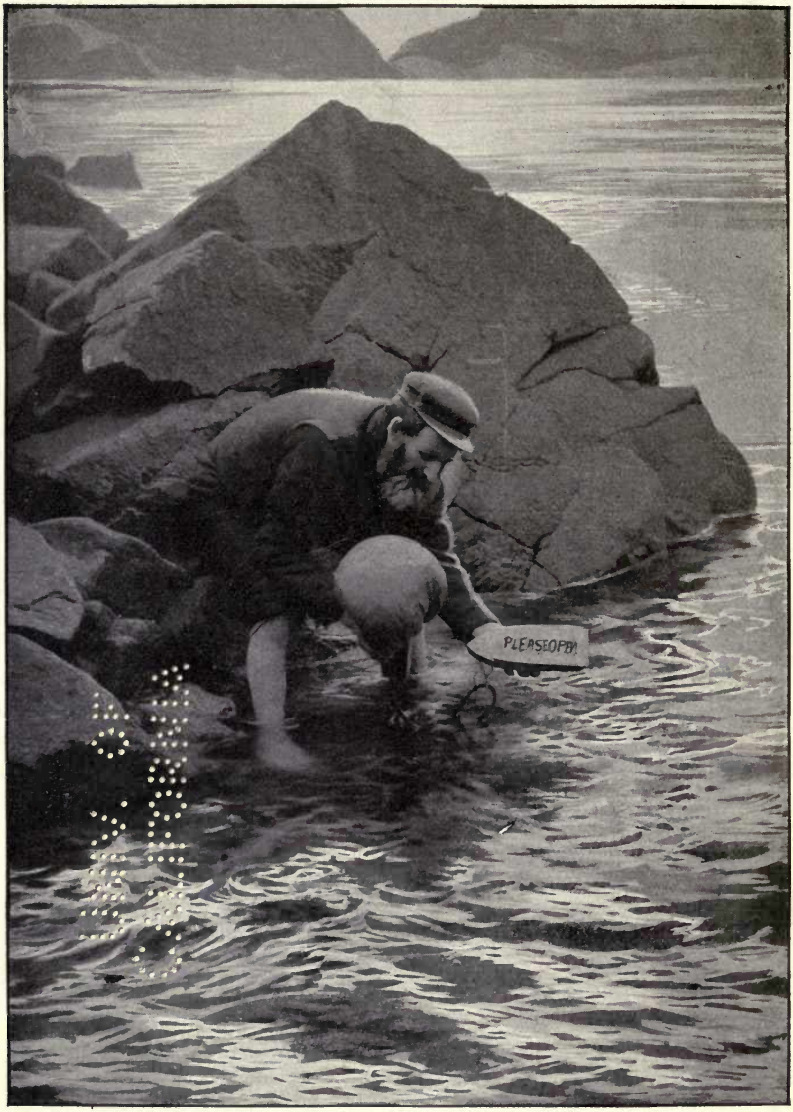


DISPATCH OF THE ST. KILDA MAIL-BOAT

With Nature & A Camera

Being the Adventures and Observations of a Field Naturalist & an Animal Photographer

By

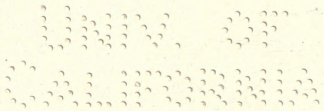
Richard Kearton, F.Z.S., F.R.P.S.

Author of "British Birds' Nests," "Birds' Nests, Eggs, and Egg-Collecting," etc. etc.

ILLUSTRATED BY 180 PICTURES FROM PHOTOGRAPHS BY

Cherry Kearton

POPULAR EDITION



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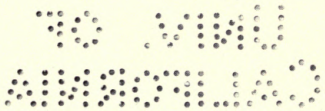

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To

THE MEMORY OF OUR BELOVED

FATHER AND MOTHER,

WHO NOW LIE SLEEPING WHERE

THE ROCK THRUSH PIPES HIS LONESOME NOTE

AND THE

MOORCOCK BECKS AT DAWN OF DAY

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PREFACE

Upon the appearance of my book—"British Birds' Nests"—illustrated with photographs taken direct from Nature by my brother, many of those who reviewed it in the press suggested that I should write an account of our adventures and observations whilst wandering up and down the British Isles in search of subjects for our camera and note-book. This I have done, and herein present the result for the inspection and perusal of everybody who cares to know anything about the wild life of our country. In preparing the book we have gleaned from many remote corners of England, Scotland, Wales, and Ireland, and the different groups of islands lying round about; and whether we have harvested ill or well we must, of course, leave our readers to judge. But whatever may be their verdict, I hope it is permissible for me to say here that we have worked hard and honestly, sparing no pains, danger, or expense in procuring what we considered interesting or instructive.

We have slept for nights together in empty houses and old ruins, descended beetling cliffs, swum to isolated rocks, waded rivers and bogs, climbed lofty trees, lain in wet heather for hours

at a stretch, tramped many weary miles in the dark, spent nights in the open air on lonely islands and solitary moors, endured the pangs of hunger and thirst and the torturing stings of insects, waited for days and days together for a single picture, and been nearly drowned, both figuratively and literally; yet such is the fascination of our subject that we have endured all these and other inconveniences with the utmost cheerfulness.

One great disappointment to us is that our labours cannot possibly be measured by our results. As an instance of this, my brother journeyed to the Highlands of Scotland on one occasion expressly for a photograph of a Golden Eagle sitting on her eyrie; but in vain: he was obliged to return without it.

The best pictures seem to have a fatal knack of slipping from the grasp of the natural history photographer, and the elements, alas! too often conspire to rob him of many a cherished hope.

What we have succeeded in bringing together within the covers of this book represents practically two or three limited summer holidays and such spare moments as the earning of our daily bread in the turmoil of London would permit. During the spring time we often turn out by three or four o'clock in the morning for a ramble by field and hedgerow before journeying to town, and the sweetness of these happy tramps with camera and field-glass is beyond the telling.

We enjoy the gratification of having sent hosts of amateur photographers into the fields to study wild life for themselves, and hail with extreme pleasure their efforts towards the attainment of pictorial truth and accuracy. In this book we tell exactly and candidly how we work, and can only hope that the results we are able to show will still further stimulate a desire amongst those to whom we appeal to become better acquainted with the birds and beasts of our land.

Of course, we cannot hope to please everybody. Men who love the ideal and men who centre their affections upon absolute truth do not sit harmoniously at meat together. Whilst regretting our inability to meet the former entirely, we can say that we have always striven to make our illustrations as picturesque as possible; but a necessity of our mission has been to render effect subordinate to accuracy, and the value of this will, I think, be admitted upon comparing my brother's photograph of a Fulmar Petrel with any picture of the bird in existence made by a pencil.

Whilst the general public will, we hope, appreciate our efforts and the results we have obtained, the field naturalist and the practical photographer alone are in a position to understand the true character of our difficulties. The man who essays the task of photographing a wild bird in its native haunts, for instance, soon begins to think that, if he has not succeeded in solving the mystery of perpetual motion, he has discovered the creature

possessing the secret. We have spent hours and hours and plates innumerable on some birds without obtaining a result about which we could get up any enthusiasm.

In regard to the text of this work, I can only say that I have endeavoured to make it bright, interesting, and accurate, and hope that I have in a measure succeeded.

I doubt not we shall be accused of adventurous foolhardiness. I must plead that we are English, and that our failing is a very common one amongst young fellows bred and born on British soil.

In conclusion, my brother and I heartily thank our friends in every part of the country for the facilities and help so ungrudgingly rendered. Landed proprietors, sportsmen, farmers, gamekeepers, boatmen, lighthouse-keepers, and others have all combined most willingly to make this book possible.

RICHARD KEARTON.

BOREHAM WOOD, ELSTREE, HERTS.
November, 1897.

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WITH NATURE AND A CAMERA

CHAPTER I.

ST. KILDA AND ITS PEOPLE.

AFTER having exploited many of the favourite sea-bird breeding stations on the coasts of England, Scotland, and Ireland, we were very desirous of an opportunity of visiting the paradise of British ornithologists, and accordingly made arrangements as far back as Christmas, 1895, to accompany our friend, Mr. John Mackenzie, jun., on his annual visit as factor to St. Kilda.

We arrived in Glasgow early on the morning of June 11th, 1896, and after getting our luggage on board the *Dunara Castle*, we went in search of a supply of tinned provisions for ourselves and a quantity of sweets and tobacco for the natives.

During the afternoon we were joined by our friend, Mr. John Young, and had a telegram wishing us success from the veteran naturalist of the North—Mr. Harvie-Brown.

As soon as the windlass had ceased to rattle and the last bag of meal was aboard, we dropped down the Clyde and steamed away to the North. The following day was spent in discharging cargo at various Hebridean islands, catching flounders, and

speculating upon our chances of fetching St. Kilda on the morrow. As an instance of the weather-wisdom of the natives of the Western Isles, I think it worth while to record the prophecy of a shrewd old man—an inhabitant of Loch Boisdale—at sundown on the twelfth. He said that on the following day we should have a strong breeze from the south-east in the morning, a shower about dinner-time, and a south-westerly wind with sunshine in the afternoon.

Early on the morning of the thirteenth we arrived at weird and lonely Obbe, our last calling place before attempting to breast the rolling waves of the Atlantic, and carry the first news of the doings of the outer world during the year of Grace eighteen hundred and ninety-six to the isolated folks living—

"Where the northern billows in thunder roar
And dash themselves to spray on Hirta's lonely shore."

Our captain very much doubted whether we should be able to land at St. Kilda on account of a stiff breeze which was blowing from the very worst of all possible points of the compass, viz. the south-east. When the wind is in this quarter it fills Village Bay—the only place in which a ship can find shelter—with such fearful seas that it is exceedingly dangerous to enter.

The official pilot, a wrinkle-visaged, weather-beaten old man, who came aboard at this place, was, however, like the seer of Loch Boisdale, hopeful of an early change in the weather, and advised a trial.

Whilst landing two or three passengers, a friend of mine showed me a small, whitewashed, stone cairn, built upon a rock for the guidance of

navigators, on the top of which a pair of great Black-Backed Gulls had made their nest and laid three eggs the previous year.

When we got clear of the Hebrides, and were fairly launched upon the bosom of the mighty Atlantic, the waves began to make themselves felt, and to render the after-deck uninhabitable except for such as could don oilskins. By-and-by the Hiaskers loomed black and weird on our port. We were told that these rocks are visited in October by fishermen in order to kill Seals and extract the oil from their bodies.

Towards noon the weather thickened considerably, and a drizzling rain commenced to fall. The steamer was now rolling and pitching to such an extent that most of her passengers lost all interest in wallowing Porpoises and plunging Gannets, and experienced those unpleasant sensations which for a time rob all natural objects of their charm.

When we must have been quite twenty miles away from St. Kilda, I noticed a couple of dead Kittiwakes float past the ship, and directly afterwards my friend Mackenzie pointed out a Fulmar Petrel flying along on our starboard. The bird is easily distinguished from the Gulls by its astonishingly graceful gliding flight. It seems literally to slide over the crests and through the hollows between the waves. I many times thought that the curling crest of a breaker must overwhelm one that was flying towards it; but the billow was topped without a wing flap, and with the utmost grace and ease.

Speculation was rife amongst such of the passengers as were well enough to be on deck as to the distance and direction of our goal. I knew that

ST. KILDA VILLAGE.

we were not many miles from it, and that we were travelling in the right direction, because of two encouraging signs — bird-life was increasing: and nearly all the companies of Puffins, Guillemots, and Razorbills astir were heading straight in the same direction as we were steaming.

A little after noon the wind began to veer round to the south-west, and by two o'clock it was quite fair, and the clouds commenced to lift, when a cry went up of "Land ahead!"

The sight was sublime. In front of us loomed the gigantic rock, with its summit buried in white mists, and its base surrounded by a fringe of foam left by the broken billows.

As we passed Rock Lavenish the ship got the full benefit of wind and tide on her port, and, in consequence, rolled fearfully. Her decks were often at such an acute angle that the sailors themselves were obliged to hold on to whatsoever stable article lay within reach. No sooner, however, had we got inside Village Bay than the sea became almost as smooth as a mill-pond, and everybody was on deck, gazing intently at the weird scene. The sombre grandeur of the place was as awe-inspiring as the most dreadful page in Dante or Milton, and required the pencil of a Doré to do justice to its sublimity. The booming of the tide in the caves that run beneath the Doon sounded like the growl of chained monsters that had made a meal of the men and women who had once lived in the straggling line of primitive-looking dwellings standing at the foot of steep Conagher without a sign of life near them.

During the spring a bottle had been picked up somewhere amongst the Western Isles with a letter in it, purporting to have been sent from St. Kilda, with the information that a Spanish ship had been lost there during the winter, and that sixteen rescued sailors were waiting to be taken off. A couple of Glasgow pressmen had accompanied us, and endured all sorts of hardships and discomforts that the dull work-a-day world might enjoy reading of the adventures and hairbreadth escapes of the survivors. I observed them wistfully scanning the shore in search of some evidence of the castaways, and felt genuinely sorry for their disappointment

on discovering that the whole business was a cruel hoax.

The St. Kildans had no knowledge of the date of our coming, and the dogs, numbering between thirty and forty, were the first to discover our presence in the bay and tear pell-mell down to the water's edge. The dogs of Hirta—which is the Gaelic name of St. Kilda—are a distinct feature of the place, and whenever a boat is being launched or hauled in there they all are congregated at the water's edge, engaged in furious barking, which generally ends in a fight, and a bundle of three or four, closely locked together, rolling into the sea.

As nobody was to be seen, our captain blew the ship's whistle, but although he succeeded in making a prodigious din which echoed and re-echoed amongst the crags, causing the sheep to scamper away up the steep hill-sides, he produced not a sign of human life on the place. After waiting a few minutes, he sent forth another loud blast, which frightened the Kittiwakes off their nests and sent them wheeling like a little snow-cloud across the bay. In a while, a small boy, who was evidently more curious or energetic than the rest of the population, came running down to the shore to gaze at us. Nearly every writer who has visited St. Kilda has noted this seeming indifference of the natives to the arrival of strangers, and commented upon it. I think that the clean, shining faces, and smooth, glistening hair of the women, and general Sunday appearance of the men, afford an explanation. They are caught in what they consider an unpresentable state, and the time taken up between the arrival of a boat in the bay and the putting off of the natives is occupied in washing and tidying themselves up a bit.

ST. KILDANS LANDING STORES.

By-and-by a boat put off and came alongside. I was particularly anxious to hear the first words of salutation from men who, though actually living within the confines of the British Isles, are in reality more out of touch with their country than the natives of Vancouver Island or Timbuctoo. As I could not get on deck in time, I popped my head out of a port-hole, and was startled to hear the minister wish everybody "A happy new year."

When we got ashore, we found most of the women and children had come down to the place of landing with great checked handkerchiefs full of birds' eggs, chiefly those of Guillemots and Razorbills, for which they found a ready sale at a penny a piece amongst the passengers and crew.

The first two things which struck me upon landing at St. Kilda were the apparent dearth of sea-bird life and the joyous songs of the Wrens.

We climbed to the empty cottage in which we were to stay, and after sweeping out the plaster that had fallen off the walls during the preceding twelve months and lighting a fire on a grateless hearth, we began to set things to rights. The place being half buried in the base of a steep hill called Oisaval was fearfully damp, and when my brother, with the instinct of the photographer, commenced to prowl round in search of a "dark" room, the boards were in such a rotten condition on the ground floor that he fell through.

After tea we walked down to the beach to watch the natives bring their provisions ashore. The men conveyed the bags of meal and flour from the steamer to the rocks in their boat, whilst the women performed the far more arduous task of carrying them on their backs up the steep path to the cottages.

Each family consumes in a year nine bolls of oatmeal and flour, averaging out at one hundred and twenty pounds per head per annum; which is, according to the factor, twenty-eight per cent. more than the Hebridean ordinary crofter supplies himself and his family with.

We slung our hammocks in two upper rooms of the empty cottage, and turned in at midnight prepared to bid extravagantly for sleep; but, alas! just as I was dropping off, I heard a resounding bump on the floor and an indistinct muttering in the next apartment. It was our friend, Mr. John Young, who being somewhat rotund of form, had fallen out of his bed of string, which unfortunately had not been shapen for turning-over in. The next night we turned a long form with a high back face to the wall for his accommodation, and thereafter he slept in a kind of crevice from which there was no means of accidental escape.

We arose early the following morning, and, it being the Sabbath Day, we prepared for service. Eleven o'clock came round, but there was not a sign of anybody astir on devotions bent. We waited with patient curiosity until half-past twelve, when an old ship's bell, erected on the top of a wall near the church, began to summon worshippers to the House of Prayer by a weird out-of-place kind of tinkle, tinkle, tinkle. In our ignorance we supposed that time was a little out of joint on the island, but afterwards learnt that the indulgent minister, Mr. Fiddes, had considerately given his little flock an hour and a half's grace out of compassion for them, on account of their extra toil and exertion in landing their provisions the previous day.

The church, which is also used as a day-school,

slopes considerably from the door at which the people enter to the end at which the pulpit or rostrum stands. The floor, except just beneath the feet of the worshippers, where there is a loose scaffold board, consists entirely of Mother Earth. The aisle is roughly laid with cement, put down by the minister's own hands. We were told a good story about a supply of cement sent to St. Kilda for this purpose by some generous donor. The citizens of Village Bay are never in a hurry, and after the "bags of dust" arrived at the island, they put them down outside the church to wait. When an inquiring friend turned up the following summer and asked how they had got on with the floor-laying, they told him that the "bags of dust" had by a miracle all turned into lumps of rock before they had had time to use them.

The service was conducted in Gaelic, and consisted of reading the Scriptures, singing the Psalms, prayer, and a very long sermon, all of which I flatter myself I sat under for the space of an hour and a half without lowering an eyelid, although I understood not a single word uttered. The collection was taken in two boxes, affixed to long handles. With these the platemen easily gathered the harvest of coppers as they walked up the aisle, without pushing in front of the congregation or bothering anybody for assistance in getting the boxes up and down the pews. They were primitive, but exceedingly sensible kind of boxes.

As soon as the minister had left, the women all filed silently out of church before a man stirred from his place. I was greatly pleased with this custom, thinking it to be a courteous deference shown to the fair sex of St. Kilda, whose industry and modesty render them entirely worthy of it,

but have since learnt that it is a lingering relic of Roman Catholicism which is still in force on the Continent. In evidence of the religious fervour of the St. Kildans—which can, I suppose, to some extent be reckoned up by census methods — I noticed that over seventy-five per cent. of the entire population were in church.

If Mr. Sands faithfully recorded what he saw at this place in the 'seventies, when the people went to church "with sorrowful looks, and eyes bent upon the ground like a troop of the damned being driven by Satan to the bottomless pit," and no one spoke to another above a whisper, or could look to the right or left without considering he had sinned, a very great improvement has taken place in the direction of reason and cheerfulness. Directly we got out of church, they all doffed their bonnets and shook hands with us, and such as were able to asked us how we were and chatted with us all the way up the path to our cottage.

All the houses in St. Kilda, excepting one of which more hereafter, are substantial one-storey stone structures with zinc roofs securely fastened down by iron bands. They contain two rooms, each of which is lighted by a small four-pane window. Although they have fair-sized chimneys, some of which are even surmounted by earthenware pots, they are generally full of smoke for some reason or other, which is, I think, to be sought in the peculiar conformation of the hills around them. They are far ahead in point of comfort and conveniences of nearly all the crofters' dwellings I have been into in Harris, Uist, and other Hebridean Isles.

As the stranger walks along the path in front of the houses, he is struck by three things—the

strong smell of Fulmar oil, the plenitude of birds' wings and feathers on the midden heaps, and the numbers of birds' eggs that adorn nearly every window.

Whether they mistrust each other in Hirta or not I do not know, but I was somewhat surprised

WOODEN LOCK.

DETAILS OF LOCK.

to find that in a community where crime is unknown they had ingeniously-constructed wooden locks on all their cowhouse doors. The fact that the cow-houses were once dwelt in by the people themselves cannot be accepted as a satisfactory explanation, inasmuch as they have—instead of utilising the old locks for their dwelling-houses—made new ones, although oak and other kinds of hard wood are

particularly scarce on the island. The locks and keys are made entirely of wood, save for the two or three nails holding together the parts of the former. I bought one as a curiosity, and the illustrations on the opposite page will to some extent explain its construction. A small piece of hard wood working up and down a perpendicular kind of box inside the lock drops into a mortise in the bolt, and effectually prevents it from being withdrawn until the hidden perpendicular bolt, for such it may be described, has been raised by the key, which is fashioned so as to fit into a part of it.

There can be no manner of doubt, I think, that St. Kilda was inhabited close upon, if not quite, a thousand years ago; for in digging out and restoring an underground dwelling known amongst the natives as the "fairy house," which had been only partially explored and to a great extent destroyed by a previous visitor, we came across the objects represented on the following page. The particulars about the choicest of our finds have been kindly supplied to me by my friend Dr. Anderson, Curator of the National Museum of Antiquities, Edinburgh, whither they were sent by the chief, MacLeod, who owns the island, and who generously insisted upon defraying the entire cost of excavating and restoring the subterranean dwelling.

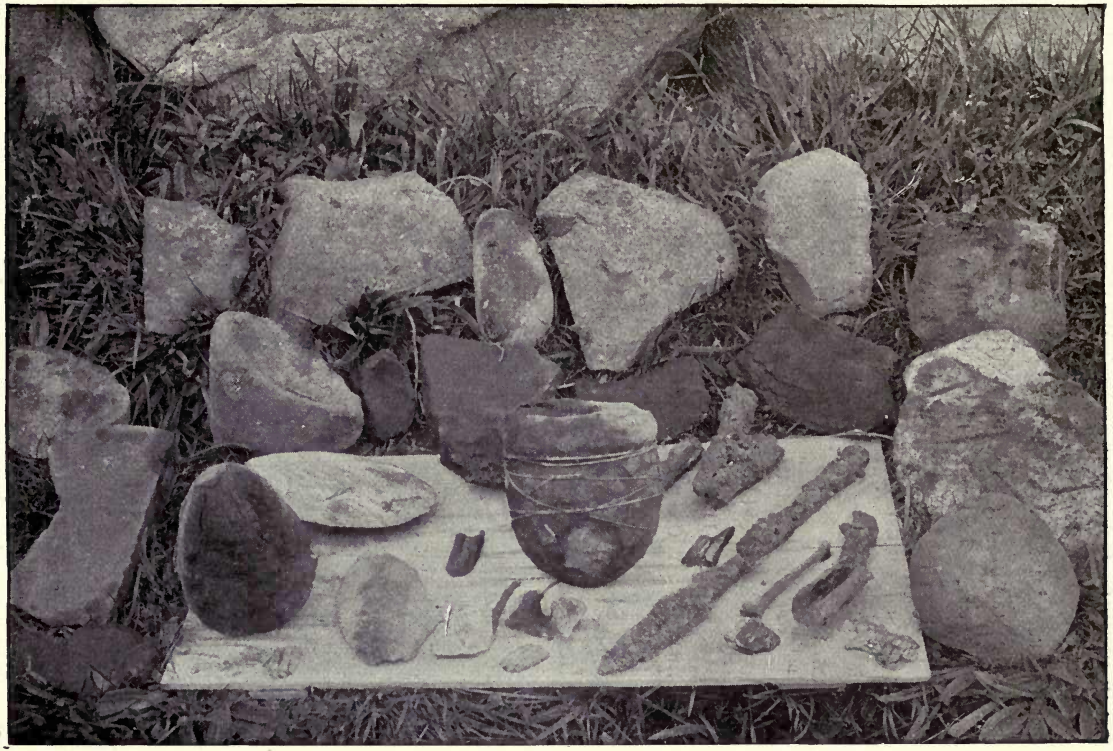
The iron spear-head on the right hand side of the picture is a weapon of war belonging to Viking times, and is in all probability a thousand years old. The conical-shaped stones belong to the same period, and were used, it is thought, as net sinkers or loom weights. They were cracked and split, a condition due no doubt to some extent to the kind of stone

from which they had been made, but probably exaggerated in the case of one of them (which we were obliged to tie together with string before it could be photographed) by the fact that it had been heated, as it bore traces of having lain in the remains of a peat fire. The St. Kildans said that these stones were used in former times for putting into the foot of a stocking and dashing out the brains of invading enemies, some of whom called to kidnap able-bodied men to serve in their ships in place of hands washed overboard during stormy weather.

We found a lot of fragments of earthenware vessels half an inch thick, and so blackened on the outsides as to lead us to suppose they had been placed on a fire for cooking purposes. They were in all probability made on the island and used in the Viking times. Such vessels were manufactured and used all over the Western Isles of Scotland, from a very early period down to the time when the steamers brought Staffordshire ware into fashion.

The other implements figuring in the picture consist of hammer-stones, whetstones, rubbing-stones, or grain-crushers, and hollowed stones which may have been used as lamps. Curiously enough one of the lamp-stones we found was almost exactly similar in size and shape to one still in use on Borrera.

The entire credit of properly investigating and restoring this interesting home of primitive man belongs to our friend, Mr. John Mackenzie, jun., who takes a great deal of interest in the history of the place. Some idea may be gathered of the condition of this strange relic of bygone days from the picture taken of it before we commenced digging, and the fact that four or five feet from the entrance the passage was completely blocked up with earth and stones, which were overgrown with

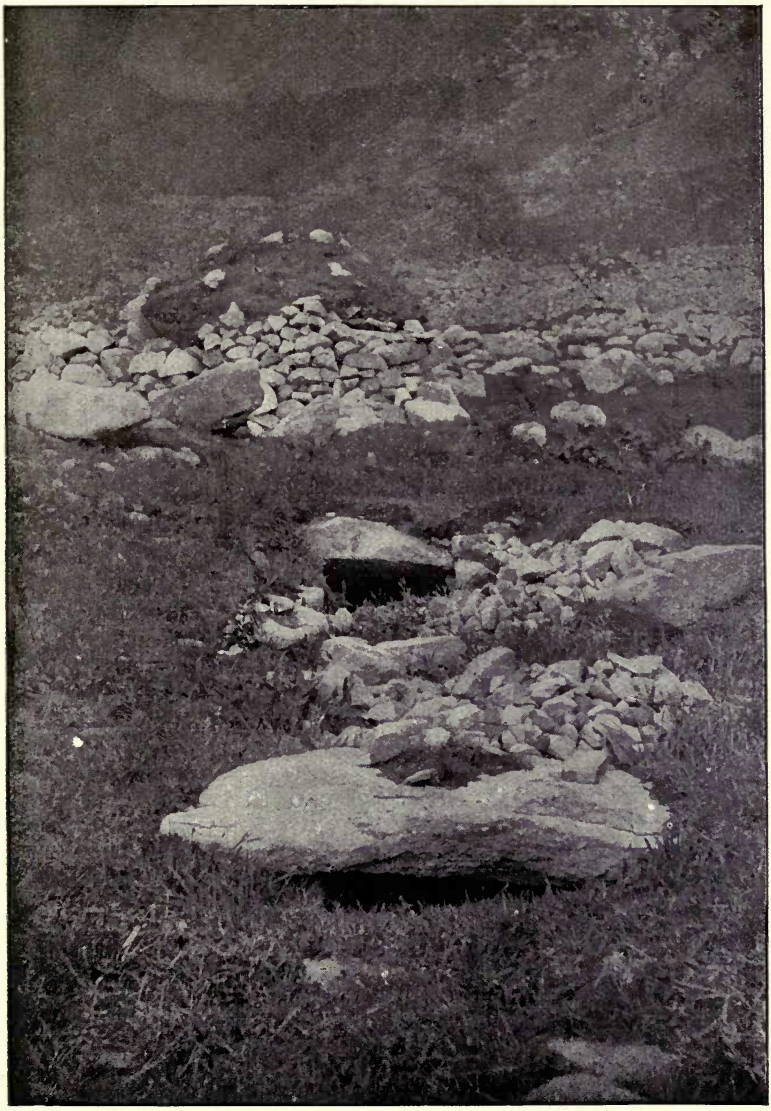


ANTIQUITIES FROM UNDERGROUND DWELLING.

ferns of the most delicate green tint I have ever seen. As I was anxious to possess some of these undamaged, I wriggled my way inside and secured a few, which are now growing in my little Hertfordshire garden.

The dwelling is something in the form of a huge drain, some thirty or forty feet in length, four feet in height, and three in width, with a passage of somewhat similar capacity, but only about nine or ten feet in length, running at right angles to it on the left hand side, and about half way from the entrance. This is, I believe, supposed to have formed the bedchamber of the people who inhabited the rude house, the entrance to which commands an excellent view of Village Bay. This last fact was, no doubt, of great importance, in order that the people might have early knowledge of the approach of enemies. Neither had the owners of this underground mansion been unmindful of the benefits of some sort of sanitary arrangement, for we found a drain beneath the floor, made, no doubt, to carry off the slops from their crude earthenware bowls. We also came across a lot of limpet shells and bones of sheep and birds of various kinds.

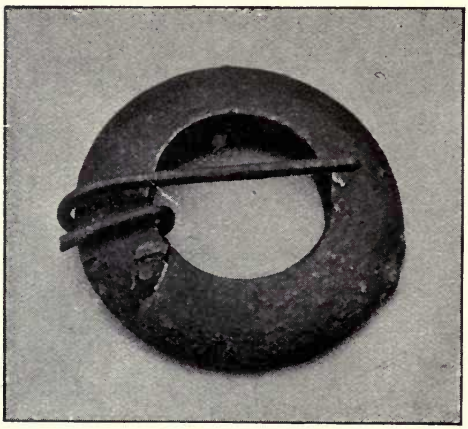
Many theories have been advanced as to the origin of the inhabitants of this lonely rock, and a curious tradition exists as to its acquisition by members of the outside world. The inhabitants of Harris and Uist agreed to make it the prize for a boat race, and accordingly set out to row across the intervening waste of waters. So equally matched were the crews in regard to pluck and endurance that they arrived at St. Kilda almost at the same moment. The Uist men, however, led by a few strokes, and hopes of winning ran high amongst



ENTRANCE TO UNDERGROUND DWELLING.

them when Colla MacLeod, the chief of the Harris gang, chopped his left hand off and flung it ashore over the heads of his competitors, and secured St. Kilda and its satellites to himself and his descendants for all time.

My friend Mackenzie says that the progenitors of the St. Kildans were undoubtedly transported from Skye by the Chief of MacLeod for various offences, and in evidence of this points out that whenever there is a row in that island the restorers of peace will still threaten to send the disturbers to St. Kilda. Further, that mothers say to their children when they are troublesome, "If you don't be quiet, I'll send you to St. Kilda," just as a Lancashire dame will terrify her unruly offspring by threatening them with the bogie man.



ST. KILDA BROOCH.

The order of things in St. Kilda is sometimes a good deal reversed. For instance, the men make all the women's clothes, whilst their future wearers dig the potato-beds or pull dock-leaves for the cows. As a result of this, the dresses are neither fashionably made nor very close-fitting. I saw one young woman in church with her frock skirt hung upon her hips by the aid of a large French nail, the head and an inch or so of which protruded awkwardly from the material it was pinning together.

This, however, did not abate my respect for the woman one jot, as I would infinitely rather see a member of the fair sex with her attire stuck full of French nails than one decorated with birds' wings.

The younger women wear hats and bonnets whilst in church, but the elder ones still adhere to the picturesque, many-coloured handkerchief and shawl over their shoulders. I was considerably struck by the brooches with which they fasten their shawls. These are of two sorts — one, a large copper ring, said to be made from an old penny beaten out, and the other consisting simply of a ship's brass washer, with a wire pin attached to it. In both cases the sides of the shawl to be fastened are pulled through the ring and then transfixed by the pin.

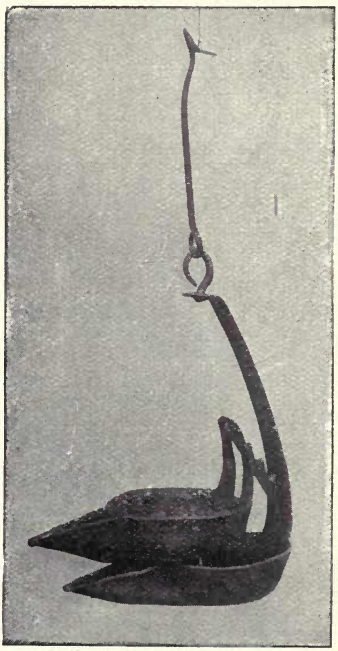
I was much puzzled by seeing the women tramping about amongst the grass in the enclosure round the Village bare-foot and bare-leg with their skirts tucked up to their knees, pulling dock leaves. It turned out upon inquiry that the cows refuse to be milked unless they are being fed the while with this weed. Poor women of St. Kilda! theirs is a hard lot. They shoulder an immense load of dock leaves which they carry up the tremendously steep hill separating the Village from the Glen, where the cows are milked, and often fetch back an equally great load of turf in addition to their buckets of milk. They also milk a number of ewes on the island, but although we tried every device to get them to allow my brother to photograph them in the act we failed. They would not permit this to be done for love or money, under the impression that people who saw the picture would laugh at them.

UNMARRIED WOMAN.

MARRIED WOMAN.

The married women are distinguished from the unmarried ones by a white frill which is worn in front of the head-shawl or handkerchief and serves the part of a wedding ring, which is unknown in St. Kilda.

As illustrative of the love of gaudy-coloured apparel existent amongst the women of this lonely isle, Seton says, "When the Rev. Neil Mackenzie went to St. Kilda in 1830, his servant-maid, a native, asked permission to take the hearth-rug to church by way of a shawl. Regarding her proposal as a joke he innocently assented, and to his infinite astonishment he beheld the girl in his own pew enveloped in the many-coloured carpet, the envied of an admiring congregation! All the women in the island were eager candidates for the 'shawl' on the following morning, some of them offering to give ten birds for its use."



IRON LAMP.

Side by side with much that was picturesque and delightful in its primitive simplicity, we came across things of appalling modernity: such as a woman wearing a Piccadilly fringe, a piece of barbed-wire stretched round the minister's garden, and a youth sporting a dicky. It is wonderful to think that within the confines of the British Isles on the

eve of the twentieth century, it is still possible to find a man sitting on Friday night in a rude semi-underground house lighted only by the primitive stone lamp of his forefathers of prehistoric times; and still more so, perhaps, to reflect that the same man may on the following Sunday so far link the distant past with the present as to be sitting in church with a dicky and tie on, and a copy of the Bible printed in Gaelic on a book-rest before him. Yet such is the case.

When the St. Kildans go to Borrera to pluck the sheep or catch birds, they stay in a semi-underground hut—which I shall describe hereafter—containing a lamp of the Stone Age still in use.

We were able to trace the history of illumination at St. Kilda with a fair degree of completeness. First of all we saw the stone lamp on Borrera, then an iron one from which the illustration on p. 22 was made, and lastly a cheap paraffin abomination which, when alight, considerably increased the horrors of darkness. Its small, foul smelling flame was burning dimly within a smoke-blackened globe unrestricted by anything in the nature of a chimney.

We noticed that the natives were fearfully inquisitive, but scrupulously honest. Martin, who visited the "lone isle" just two hundred years ago, says that the inhabitants "use swimming and diving, and are very expert in both." To-day, according to Mackenzie, not a single man or woman enters the water unless it be by accident. He relates that when he first began to visit the place as factor, he went down to the Bay one morning to have a swim. So unusual was the sight that the entire population rushed down to the beach to watch him. This led to an extremely

awkward situation, for the women squatted themselves down beside his clothes. He swam round and round for a while in the hope that their curiosity would ere long be satisfied, and that they would then return to their household duties. Not a bit of it. The sight of a man performing the part of a fish was far too entertaining a business to be regarded with indifference, and they sat on enchanted until he swam close in and told them to go away.

Mr. Fiddes, the minister, told me that the temperature of the sea round St. Kilda is lower in summer than in winter, on account of the icebergs that become detached in Polar regions and drift southwards into the Gulf Stream. He also informed me that he was at that moment disproving the assertions of horticulturists that strawberries could not be grown in so high a latitude as that in which he lived by producing the fruit in his own garden.

I leave horticulturists to crack this nut for themselves, and hasten to present a much more startling one for ornithologists from the same gentleman. He told me in all good faith and sincerity that Great Northern Divers make no nest at all, but hatch their single egg under their wings, in which position he had himself seen a bird carrying one.

Upon re-telling this astounding story to Mackenzie his gillie overheard it, and afterwards told me that the minister was quite right, as three independent witnesses, including his own brother, had, whilst sitting on the cliffs of Skye one Sunday afternoon, witnessed a Great Northern Diver lay her egg in the sea below them, and dive after and catch it before it reached the bottom. On rising to

ST. KILDANS BARTERING WITH THE FACTOR.

the surface again the bird tucked her egg away under her wing and swam off. When I showed my scepticism in regard to the accuracy of the reports of this wonderful performance he said, "Ah weel, sir, if ye dinna believe it, I will no believe your story that Cuckoos put their eggs into other birds' nests with their nebs." This had reference to a conversation he had heard between his master and myself, during which Mackenzie told me that he once shot a Cuckoo with its egg in its bill.

The factor and the people were soon hard at work buying and selling oil, feathers, and cloth, on the one hand, and pails, spades, and similarly useful articles, on the other, down at the storehouse by the sea.

We stood by for a few minutes to watch the market, shown in the picture on the preceding page. The chattering and excitement were incredible.

In the afternoon of the same day all the women and children assembled in our cottage to munch sweets and go through the packages of many-coloured kerchiefs, shawls, and petticoats the factor had brought with him for their inspection and purchase. And for six mortal hours did Mackenzie, poor man! withstand with the utmost equanimity a continuous fusilade of questions and badinage. But this was not all. At eleven o'clock at night a soft tap-tapping was heard upon the door, and in they all trooped to re-open their bargaining. I wonder what the average Bond Street shopkeeper would say to being invaded at this hour by a crowd of lady customers who had been unable to make up their minds in the afternoon.

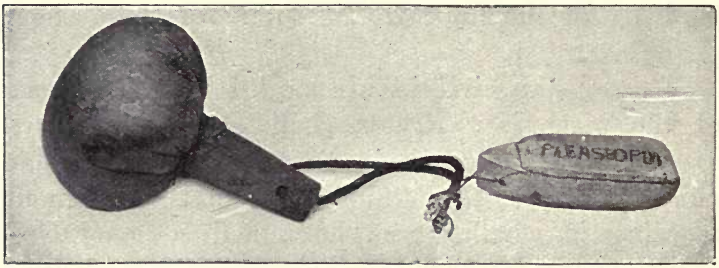
A St. Kilda woman always regards everybody with suspicion, and does not hurry over a purchase, thinking that she is being cheated.

The Western Isles form a happy hunting-ground for a number of Jew pedlars, and one of these found his way to St. Kilda on the steamer which came to take us off. No sooner had this man opened his bundle of gaudy wares than he was surrounded by an excited crowd of women and children, who began to handle and examine everything he had. I saw the minister's servant-girl seize a brilliantly-coloured petticoat, and rushing up to her reverend master thrust it in his face with childish glee and beg him to buy it for her. I mention this as evidence of the innocent simplicity of these remote people.

One of the civilities demanded by the etiquette of the place is that you shall shake hands with everybody you come in contact with night and morning. The first thing they ask you in the morning is whether you have had a good sleep. If an answer in the affirmative be given they are satisfied, but if, on the contrary, you have not enjoyed a good night's rest, they follow up their solicitation after your welfare by inquiring whether you have eaten a good breakfast. Should this be the fact, they think you have no serious reason for complaint; but should the contrary be the case, they are alarmed, and show a great deal of natural sympathy.

Although extremely pious and well-behaved, they are deeply interested in the great life and death struggles of the outer world; and one of the first questions they ask, upon being visited by strangers, is whether the Queen is at war with any other country, and, if so, who is getting the best of the conflict. Nothing delights them more (men and women alike) than to hear that the enemy is being smitten hip and thigh.

For nine months in the year the inhabitants of St. Kilda are doomed to an utter ignorance of the doings of the outer world unless some stray fishing smack should, under favourable conditions of wind and tide, venture to drop in and see them. They have, however—through the initiative of Mr. John Sands, I believe—improved upon poor Lady Grange's method of trying to communicate with friends during her eight weary years of exile in these desolate regions. It is recorded that this unfortunate woman



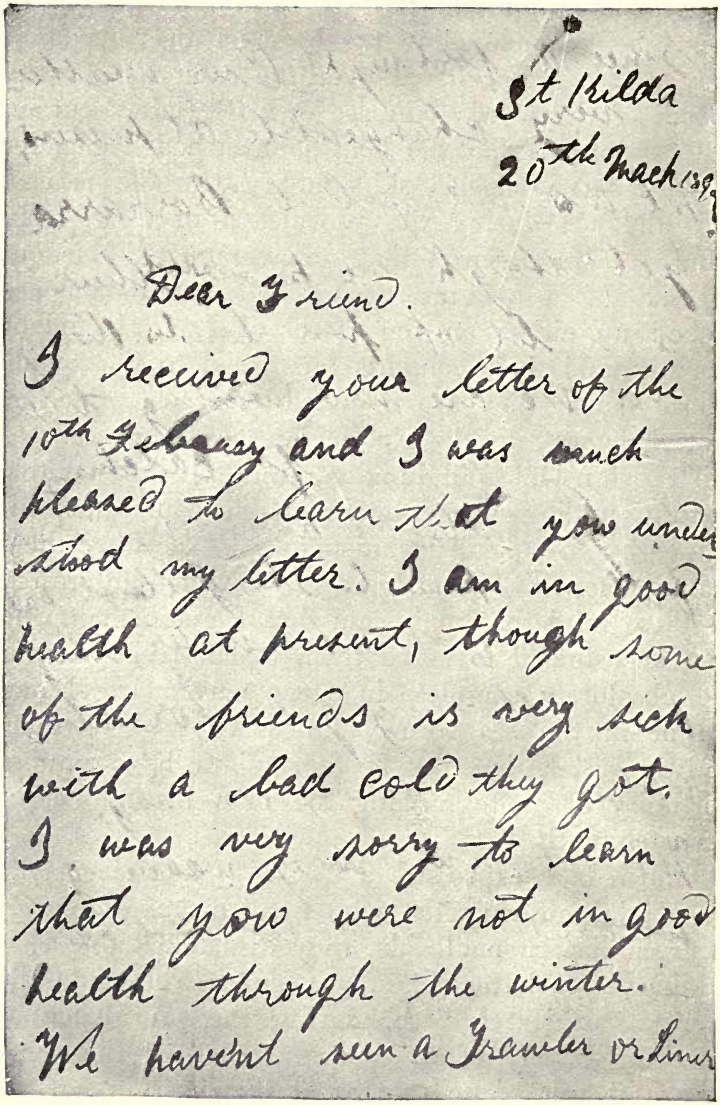
ST. KILDA MAILBOAT.

wrapped up letter after letter with yarn in pieces of cork, and consigned them to the sea in the hope that some day one would be wafted to where some pitying hand would find a means of delivering her from a bondage brought about through some disagreement with her husband, Lord Grange, whose friends kidnapped the unhappy lady in 1732, and, after forcibly detaining her on some small Hebridean island a while, conveyed her to St. Kilda, where she is said to have spent a great part of her time in weeping.

When the natives now desire to send news of any happenings on the island to their friends, they cut a cavity in a solid piece of wood roughly hewn like a boat, and, putting a small canister or

bottle containing a letter and request that whosoever picks it up will post it to its destination (a penny being enclosed in the boat for that purpose), they nail a lid or hatch over the cavity, with the letters of the words "Please open" crudely cut on the top of it. To the boat is attached a bladder made from a sheep's skin, and the whole is cast into the sea during the prevalence of a westerly wind. I was assured that an average of four out of six of these interesting little mailboats are picked up either on the shores of Long Island or Norway, and their contents forwarded to the people whose hands they are intended to reach. Such as find their way to the Norwegian coast are sent to the Foreign Office in London, from which venerable institution they emerge again in due course, accompanied by an official document often exceeding them many times in length. I was so much interested in these miniature mailboats that I got a man who was accustomed to make them to construct one for me absolutely complete in every particular. I had it put in the sea so as to observe its behaviour, and in order that my brother might have an opportunity of photographing the man in the act of despatching it.

As I had expressed a desire to hear from the St. Kildans during the winter by means of one of their miniature mailboats, they dispatched one containing three letters for me at eleven o'clock on the morning of March 24th, during the prevalence of a north-westerly wind. On the 31st of the same month it was picked up by a shepherd in a little bay at Vallay, North Uist, and its contents forwarded to me by post. The letters had been placed in a small tin canister, and despite the fact that they had become soaked with sea water, they



St Kilda
20th March 189

Dear Friend.

I received your letter of the 10th February and I was much pleased to learn that you understood my letter. I am in good health at present, though some of the friends is very sick with a bad cold they got. I was very sorry to learn that you were not in good health through the winter. We haven't seen a Trawler or Liner

* * * * * *

[*Facsimile of portion of a Letter received*

I may tell you that I was hunting today at the back of Conicher and killed fifteen Fulmars but four of them was lost. I was thinking of the day I was with you and Cherry photographing when a big stone fell from your feet and nearly killed Cherry. I hope to see you yet, this is to be sent in a toy boat by the first north west wind. of which Jimly Mc Queen, is Captain. with best wishes. remember me to your brother. I remain

yours Faithfully

Neil Ferguson

[*by the Author per St. Kilda Mailboat.*]

still retained a delightful aroma of peat smoke when they reached my hands, reminding me forcibly of my stay on the island.

Martin, in his entertaining account of a visit paid to St. Kilda in 1697, as already mentioned, after praising the good looks of the people, says, "The present generation comes short of the last in strength and longevity. They showed us huge big stones, carried by the fathers of some of the inhabitants now living, any of which is a burthen too heavy for any two of the present inhabitants to raise from the ground, and this change is all within the compass of forty years. But notwithstanding this, anyone inhabiting St. Kilda is always reputed stronger than two of the inhabitants belonging to the Isle of Harris or the adjacent isles."

Curiously enough, the same pessimistic belief in the physical degeneracy of the human race is rife to-day in many Yorkshire dales, and old men will as evidence of the fact point out huge stones in the remains of ancient dry walls that mark long-forgotten divisions of the land, and say that no man now living could lift them, forgetful of the fact that in all probability they never were lifted, but simply rolled into their present situations over smaller stones placed conveniently for the purpose.

The same historian whom I have just quoted also recorded the fact that men of Hirta had "generally but very thin beards." They have evidently taken the reproach to heart, for nearly all of them have now thick bushy ones.

The highest population record of the place known is two hundred souls all told, and the lowest reached, a few years back, sixty. At the time of our visit in the summer of 1896 there

were seventy-three people on the island, including the minister and his serving-maid.

Formerly the infants of St. Kilda used to be nearly all carried off by a mysterious malady known as "eight-day sickness." The disease generally manifested itself by the little stranger refusing to partake of nourishment on the fifth day after its advent into the world, and proved fatal on the eighth. So great were the odds in favour of every child born dying before the completion of its eighth day, that mothers never thought of providing clothing for their babies until they had passed the period of danger. The reason for delaying the preparation of infant garments will be understood when it is mentioned that two mothers in St. Kilda had had twenty-eight children between them, and only succeeded in rearing four. But thanks to Mr. Fiddes, who now brings the St. Kildans into the world, marries them, and buries them, all this has been changed. By proper treatment and the use of antiseptics, he has stopped the ravages of the disease; and all honour to him for his conquest.

"Stranger's cold" is another remarkable affection which invariably attacks the islanders on the arrival of a boat. It is a kind of influenza of which the natives stand in great dread, and the factor told me that he was afraid even to blow his nose in the presence of any of them, lest they should, in the event of its breaking out amongst them, accuse him of having brought it.

The malady is of great antiquity, for Martin gave offence on the occasion of his visit by telling the people that he thought their "notion of infection but a mere fancy."

During our stay on the island there were one or two cases of illness. One old man's condition

became so serious that his wife was heard chanting over him, evidently in the belief that the time had come to sing his praises in the usual form of a death dirge. She was a little too previous, however, for by a judicious administration of brandy and bovril in small alternate doses, we set the old fellow on his legs again in a few days. The other case was that of a poor old maid who lived all alone in an ancient straw-thatched hut close to our cottage. I went with my friend Mackenzie one morning to take her a cup of something comforting, and found her lying in a huge sort of box, surrounded by two or three cats, which even in St. Kilda are associated with old maids. In front of the entrance to the box-like bedstead on which this old woman was lying were four thick flags driven into the ground so as to form a rough kind of square, in the centre of which smouldered a small turf fire. Directly over this, and suspended from the roof-tree, was a long, smoke-blackened chain used for hanging kettles and cooking-pots on.

Whilst we were on the island a doctor came to vaccinate the children, but so small was the faith of the natives in Jenner's great discovery, that he was obliged to take his departure without having operated upon a single child. Perhaps they did not understand that he had come in order to prevent a repetition of the terrible disaster their forbears suffered in 1724, when an awful visitation of small-pox swept away the entire adult male population of the place with the exception of four, who were catching Gannets on Borrera or Soa at the time of the outbreak. As there was nobody left to man a boat and fetch them off, they remained from August of one year to Whitsuntide of the next, and thus escaped the ravages of the terrible scourge.

St. Kilda is the only place in the whole of Scotland where drunkenness is unknown, although it is said that all the inhabitants keep a supply of whisky by them for use in cases of illness. Such admirable self-restraint is worthy of all praise. They could have had no great acquaintance with intoxicating liquors even in Martin's time, when they were much gayer and livelier than they are now. He says: "One of the St. Kilda men, after he had taken a pretty large dose of *Aqua Vitæ*, and was become very heavy with it, as he was falling into a sleep and fancying it to be his last, expressed to his companions the great satisfaction he had in meeting with such an easy passage out of this world. For, said he, it is attended by no kind of pain."

Henry Brougham says that when he visited St. Kilda in 1799 the people had "an excessive eagerness for spirits and tobacco." This certainly is not the case now. Only four men besides the minister smoke, and, although I took a supply of tobacco with me on purpose for them, they showed no great eagerness to possess it. Their taste for sweets, especially "bull's-eyes" and peppermint lozenges, was much stronger than for either drink or tobacco. Strangely enough, several comparatively recent writers have stated that they "saw no partiality for sugar and sweets"; but this we certainly observed, the men often holding out their big brown palms along with the children when "sweeties" were being distributed. As a further illustration of the existence of this taste for saccharine dainties, I may also mention that the young women and children fetched us a supply of delicious new milk every evening in return for a handful of sweets all round. So fully does the factor recognise the

pleasure these lonely folks derive from sucking sweets, that he takes a large supply with him every year.

In addition to enjoying a unique character for sobriety, St. Kilda can also boast the distinction of being the only inhabited part of the British Isles which has not been officially surveyed by Her Majesty's Ordnance Department.

We were told that some of the older people of the community knew the Bible by heart from cover to cover; but, being ignorant of the Gaelic tongue, we were unable to put this remarkable assertion to the test.

At the end of the seventeenth century the St. Kildans played jews'-harps, and danced to the music of the bagpipes, "which pleased them exceedingly"; but now they have neither music nor dancing, nor amusements of any sort. I innocently asked the minister one day what kind of games the children played. The old man smiled good-naturedly at my ignorance, and answered: "None whatever; their parents would consider it frivolity to have them taught anything except climbing rocks, catching sheep, and such other things as will become necessary to them in after-life." The austerity of the doctrine inculcated by the Free Kirk of Scotland has been blamed for this gloomy strictness; and, whilst acquitting the minister of any bigoted abuse of reason, I am willing to believe a deal in the way of religious intolerance on the part of the terribly earnest body he represents; for I once had the ill-fortune to listen to a theological dispute betwixt a number of Free and Established Kirkers, which looked much like ending in employment for a surgeon, if not an undertaker.

Whatever the cause, I can certainly testify to the fact that the St. Kildans do not now appreciate

the music of the pipes; for whenever Sandy Campbell, the factor's gillie, started a refrain upon an instrument—which, by the way, had been heard by many a dying Russian on the heights of Alma—the people scuttled out of our cottage like rats from a doomed ship. It is, I believe, an affectation in the South to cry down the sound of the pibroch; but to my hill-bred Yorkshire ears its stirring refrains when heard across a Highland loch or floating up a wild, craggy glen are simply grand, and I cannot imagine any man with a heart as big as a hay-seed who couldn't fight anything or anybody to its music. I don't think it is generally known that, on the authority of Shakespeare, the bagpipes were at one time played in England.

In olden times, pluck was considered even a greater virtue than it is to-day in St. Kilda. This is proved by the fact that every young man who considered himself brave enough to deserve the fair, was obliged to give a public exhibition of his daring on the Lover's Stone—a projecting piece of rock with nothing except two hundred feet or so of thin air betwixt it and the waves below. As soon as all the islanders had assembled at the invitation of the love-sick youth, he walked out on to the very end of the crag, and standing upon the outer edge of it on his left heel put his right to the toes of his left, and then stooped until he touched the toes of his right foot with the finger-tips of both hands. In this perilous position he was obliged to remain until those around him expressed themselves satisfied that he had vindicated his claim to manhood and fitness for a wife.

At this period, an old writer says, the women married very young—about thirteen or fourteen

years of age—and "gave suck to their children for two years."

My brother photographed the ancient Lover's Stone, but, unfortunately, a tantalising accident has robbed us of the chance of using the picture in the present work.

I was telling my friend Captain McCallum, of Glasgow, about hearing the sea make a noise in the caves of St. Kilda one night, like the booming of distant cannon, when he laughed and told me that it reminded him of a great scare the people had some years ago. A woman woke up suddenly one night convinced that she could hear the big guns of the dreaded *Sassenach* or *Saxon*, of whom they formerly—and, no doubt, with good reason—stood in great awe. She at once aroused everybody in the village, and they all fled to the rocks, where they remained until daylight convinced them that they had had their slumbers broken by a false alarm. An enemy wishing to land on the island would, I am persuaded, have to go about his business very stealthily. Sandy Campbell, the abhorred piper, told me that he had visited the place seventeen years in succession as factor's gillie, and landed at all hours of the night, but never once got inside Village Bay without being seen by someone ashore. The dogs, many of which seem to be always left prowling about outside the houses at night, give the alarm, as I discovered when wandering about in the small hours of the morning studying bird-life and habits.

I could not get any trustworthy information as to the number of sheep and cattle owned by the members of the little island commonwealth, as it was, or was fancied to be, in their interest to conceal the exact figures from the factor. I should

say from what I saw whilst on Soa, Borrera, and all over St. Kilda, that a thousand sheep and from twenty-five to thirty head of cattle would be a fairly correct estimate.

They make cheese from a mixture of cows' and ewes' milk; but I must confess that it was to me poor, tasteless stuff, lacking salt or flavour.

SOA LAMB.

On Soa exclusively is to be found a flock of from two to three hundred peculiar little brown sheep, supposed to be descendants of a few individuals left upon the island by Vikings who called to renew their supply of fresh water. These sheep, like those of Iceland, which they are said to resemble closely, are liable to produce an additional pair of horns, although I failed to discover any evidence of the fact when I examined the flock through my binoculars. They are absolutely wild,

and the St. Kildans have a particularly primitive and, I might add, extravagant method of capturing them which I had the good fortune to see in operation. A sick man had expressed a fancy for some broth made from a piece of Soa lamb, and, as we were going to work the island with camera and note-book, we took a dog or two in the boat with us. These dogs had their fangs broken, and by the aid of their barefooted masters, who sprang from rock to rock with great nimbleness and not a little excitement, literally ran down one of the timid creatures. As the sheep raced madly round the little island, they came close past where I stood, and the way they bounded from crag to crag, and skipped in single file along dangerous ledges, was simply astonishing.

My brother set up his camera and tried to photograph them as they passed him in full career, but the comparative slowness of his apparatus, an instantaneous shutter, and the great speed at which the animals were travelling, produced nothing but elongated marks of confusion against the great grey rocks on the negative. He did, however, succeed in making a picture of a lamb caught by one of the dogs and held until its master came upon the scene. This barbarous method of catching the sheep invariably ends in some of the terrified creatures going over the cliffs and being swept away by the fierce tides flowing in those quarters. The factor told me that he had volunteered to supply the people with nets, in order that they might catch the sheep with more humanity and less waste of life, but his offer was declined. They preferred the good old methods that supplied plenty of danger and excitement—two forms of entertainment very dear to the impulsive Celtic heart.

The loss occasioned by sheep being blown over the cliffs is considerable, but in Soa this is to a great extent compensated by the remarkable fecundity of the animals. Macaulay says that he was told a single ewe added nine sheep to the flock in thirteen months. "She had brought three lambs in the month of March, three more in the same month the year after, and each of the first three had a young one before they had been thirteen months old."

Clipping-shears are unknown in St. Kilda, and the wool that does not drop off or cannot be pulled off the backs of the sheep is cut away with pocket-knives.

My friend Mackenzie told me that the people wanted to cross the original breed of Soa sheep with Scotch black-faced ones, but that MacLeod, of MacLeod, the proprietor, had very naturally objected, and taken the island over himself. He said that when folks talked of half-a-crown as being the remarkably low figure at which a whole sheep might be purchased in the Antipodes, they little dreamed that there were people in the British Isles paying only the same price for the best and sweetest mutton in the world, as MacLeod only charges the St. Kildans two shillings and sixpence for each sheep they take away from Soa to kill.

Whilst passing round the back of St. Kilda one day in a boat I noticed a curious heap of stones on a grass-clad ledge far down the face of the awesome cliff; and as the collection looked too regular for a mere accidental gathering I asked how it came there, and was told that the wee cairn had been piled up by a man who was lowered by means of a long rope every autumn on to the handbreadth of rock with a sheep which he left to browse on

the few mouthfuls of luscious grass for three or four days. That any sane being should risk so much for so little seemed to me incredible.

Captain McCallum told me an amusing anecdote about a poor old woman who accompanied her kinsmen on a journey from St. Kilda to Harris in the days when they used to visit the latter place in their large boat. On the occasion in question night fell before a landing was effected, and when they did succeed in getting ashore it was on an unknown part of the coast. In searching for some kind of habitation the old woman accidentally got separated from her companions, and fell in with an object of supernatural brilliancy at which she marvelled greatly—a lighthouse. It being a sultry night the keeper had left the door open, that he might benefit by the improved ventilation. The old woman mounted the tower stairs in great awe, and when she came into the presence of the attendant and the dazzling brilliancy of his lanterns' rays she fell on her knees and began to address him as the Almighty. The man was, on his part, so startled that he concluded the aged St. Kildan was some hag from the nether regions, to which he bade her get back in language more forcible than polite.

A somewhat similar thing is said to have happened near London in the early days of ballooning, when an aëronaut alighted in a ploughed field at Coulsdon, in Surrey. A labourer who happened to be working close by at the time was so overcome with fear at the unusual sight that when asked the name of the place by the man who had dropped from the clouds, he fell on his knees and replied: "Coulsdon, if you please, God Almighty!"

The St. Kildans enjoy a plentiful supply of good water: how good I will leave poor old Martin

to tell, for, although I am a teetotaler, he drank far more than I either could or would. He says: "Of the well of Qualities or Virtues I drank twice, an English quart each time." I do not think there can be any question as to the nobility of a man's thirst who can swallow so much cold water, of whatsoever quality, at a single draught, and this singular feat half inclines me to believe in our author's theory, dealt with earlier in this chapter, anent the declining capacities and endurance of the human race, for "the present generation comes short," certainly, of his in its thirst for cold water. He further adds that "the inhabitants of Harris find it (the water of the well of Qualities) effectual against windy colics, gravel, and headaches"; but, being troubled with none of these disorders during my stay close to it, I had no opportunity of putting its efficacy to the test. The inhabitants of this remote rock are, aquatically speaking, still further blessed; for, according to the same enthusiastic authority, there is another fountain on the island, the water from which "will wash linen without soap as well as other water will with it."

Some idea of the roughness of the sea in these parts during a westerly gale, coming straight from the bosom of the Atlantic, may be gathered from the fact that waves have been known upon occasion to leap over a part of the Doon, three hundred feet in height, and pour down the slope into Village Bay in great green and white cataracts.

Martin noticed that in hauling their boats up the rocks out of the sea the natives employed "a cryer, on purpose to warn all at the same minute, and he ceases whenever he finds it convenient to give them a breathing." Exactly the same practice holds good to-day; and so long have the people

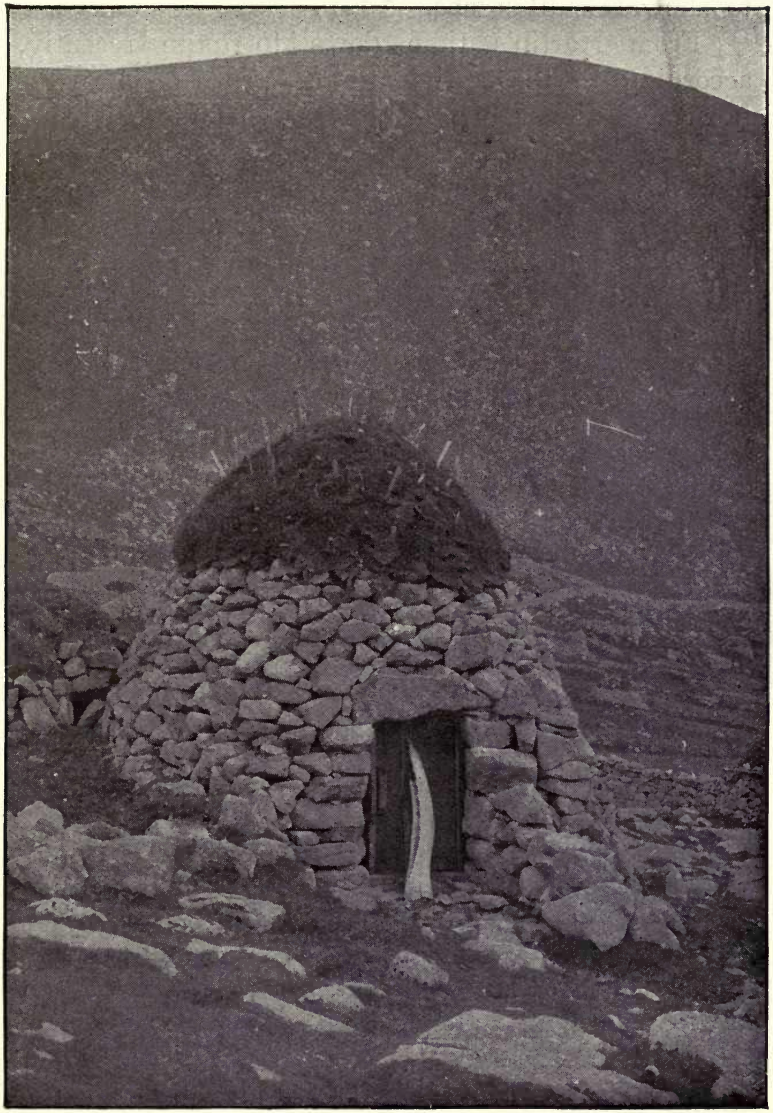
hauled their boats up in one particular spot that the rock is grooved by the grinding of innumerable keel-plates.

In that chronicler's time there were about eighteen horses on the island, but now there is not a single one.

Two hundred years ago the St. Kildans took care to keep their graveyard "perfectly free and void of any kind of nastiness"; but now, alas, it is neglected and overgrown with nettles and other noxious weeds, from the midst of which I saw a single headstone peeping, grey and gaunt, like a weird sentinel over the sleeping dead, who are, after all, in such an utterly out-of-the-world place, only a little more asleep than the poor creatures who linger round them still able to hear the boom of the sea breaking upon the rocks at their feet.

Author's Foot. *St. Kildan's Foot.*
ANKLE DEVELOPMENT.

One of the first things that struck me as peculiar about the St. Kildans was the abnormal size of their ankle joints and the thickness of their insteps. So much was I impressed with this specialised development—brought about, no doubt, by long generations of rock and steep-hill climbing—that I had the foot of a man, corresponding as nearly as possible in point of size and weight with myself,



CLEIT FOR STORING FUEL OR HAY.

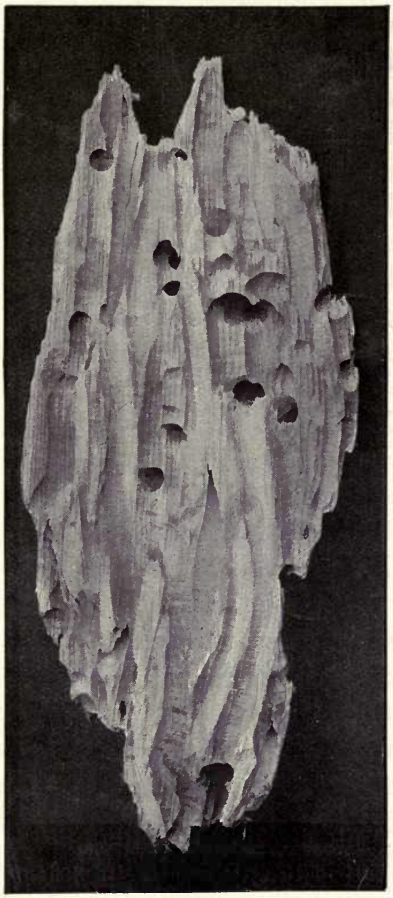
photographed side by side with my own in order to show the difference.

From Martin's time down to quite recently, according to the testimony of various writers, the fair-complexioned members of the community appear to have been in the majority, but the dark ones now have the ascendancy in point of numbers.

Their fuel consists of turf stripped from the hill sides, and stored in the numerous cleits which are dotted about all over the place like mere heaps of stones carelessly thrown together and surmounted by a few sods. The entrance to nearly all these curious structures is barred by half-a-dozen stones roughly piled one upon another, but some of the largest and best have wooden doors to them, as shown in our illustration. The object propping the door up is the jawbone of a whale, probably belonging to a dead leviathan which was seen floating past in 1886 and towed into Village Bay, where it melted so fast in the hot sun that the St. Kildans secured only 150 gallons of its oil. These cleits, which have been estimated to number no less than five thousand individual buildings, are of very simple construction, consisting of two parallel side-walls three or four feet apart and four or five feet in height, with rough lintel stones across the top, on which is piled a quantity of turf so sloped as to keep out the rain. The wind rushes through the side-walls at a furious rate—as I can testify, having spent a night in one—and dries whatever is placed in them.

The Gulf Stream occasionally takes charge of a plank washed off an Atlantic timber boat and lands it in Village Bay. I saw several lumps of wood that had come ashore in this way, but most of it had been rendered useless by the burrowings of

innumerable teredos. The accompanying picture shows the havoc wrought by these little creatures in a piece of timber I picked up and brought home as a curiosity.



DRIFTWOOD BORED BY TEREDOS.

The Gulf Stream played the St. Kildans rather a cruel trick not long ago. A man whilst out on the hill-tops one afternoon had his attention attracted by the most bewildering object he had ever gazed upon. It was a great blood-red, conical thing bobbing about in the sea away to the west. After watching it for a moment, he rushed madly down to the village with the strange news. A boat was at once launched and pulled round the end of the Doon, where it fell in with the astonishing prize which, from its remarkable appearance and shape, was adjudged to be of great value. As there was a good deal of sea running at the time, and the size and shape of the prize made it somewhat unmanageable, it took a long time and a great deal of hard work to get it home and hauled

into a safe place. When this had, however, been accomplished, they had nothing to do but speculate often and lavishly as to its value, and the fortune it would probably make for them all when its owner turned up to claim it. Alas, when the factor called the following summer, it was discovered to be only an old iron buoy that had broken loose from its moorings in New York harbour and drifted across the Atlantic. It now lies at Dunvegan, in Skye, an object of considerable curiosity to trippers, but not beloved of anybody hailing from St. Kilda. It was afterwards discovered to have taken two years to cross the Atlantic.

There are a number of domestic Fowls on the island, but their owners hold them in no great esteem, as they say the birds eat more than they are worth. When the enormous supply of sea-birds and their eggs is taken into consideration, I don't think this can be wondered at.

At one time Seals used to visit St. Kilda in such numbers that the steward took part of his dues in those the people caught. I was assured that this amphibian seldom comes near the place now, a fact which affords a curious example of the changing habits of animals.

We saw one or two Sharks swimming about in and around Village Bay, with their great dorsal fins standing out of the water dark and ominous. The natives said that their presence argued the oncoming of rough weather, but it did not arrive with particular boisterousness whilst we were there.

The young women and children used to come and sit in our cottage every evening for an hour or two, knitting and munching sweets whilst they listened to a round of funny stories, which they

enjoyed heartily. I amused them highly on one occasion by putting my brother up for auction as an eligible young man who could climb cliffs, catch fowls, photograph, and flirt. As I couldn't get a bid I offered him for a sovereign. An old maid, who couldn't speak English, informed me through the factor that she wouldn't give me sixpence for him. Not to be outdone, I at once gave her a pressing invitation to accompany us back to London, in order that she might get to know him better on the road; but she answered, with the traditional suspicion of her race, that she wouldn't go if I gave her as much money as MacLeod had, as she was too much afraid we should throw her overboard.

The St. Kildans have a deep love for their rocky home. I playfully invited several of them to accompany me on leaving the island, but they shook their heads, and told me they couldn't live without "going to the rocks." I think that this attachment to the land of one's birth is a thing proportionate to its isolation. My own heart often pines for a breath of moorland air, and in my dreams I hear the Curlews crying far away on lonely hilltops. I knew a little girl, living high up in a wild Yorkshire dale, who was compelled by force of circumstances to move away with her parents into a big Lancashire manufacturing town. One day some of her relations sent a pound of fresh butter as a present, wrapped up in dock leaves. The little girl's heart remained so true to the land of her birth that she seized one of these and said—"Let me kiss it, mother; it has come from dear old Muker."

I had heard and read a good deal about the unblushing greed and covetousness of the

St. Kildans, and must admit that I was staggered when one of them asked me in laboured English "ten shilling" as an inducement for him to put back a Wren's nest where he had found it—inside one of his cleits—in order that my brother might photograph it.

Seton records an instance of some of them going on board a ship that put into the bay, and after having a good look round and satisfying their curiosity, expecting to be paid for so doing. A similar thing happened whilst we were on the island. One evening a smart little yacht put in, and the impetuous Irish skipper to whom she belonged was so anxious to show his hospitality that he dragged some of the natives who had boarded him down into his saloon by their beards and placed a supply of whisky and biscuits before them large enough "to fill the biggest cow in St. Kilda," according to their own account. This gave them a magnificent opinion of him, and they sang his praises loudly when they came ashore. But his popularity was short lived, for he greatly upset them next day by giving them nothing, and threatening to kick them all overboard when they showed some reluctance to leave his boat without further reward.

It has also been said that the people expect to be paid for having their photographs taken. The men never objected to our photographing them, nor, so far as I could gather, expected anything for allowing us to do so, though had they done we could not have had serious reason for complaint.

I was anxious to obtain two pictures in order to show the difference in the head-gear worn by married and single women, and offered half-a-crown each to anybody who would sit; but to my

surprise no one would consent, and it was only by strategy, and a positive assurance that their portraits were not being taken to make fun of them, that we succeeded in obtaining what we wanted.

Before passing judgment on these poor creatures, it is only fair to them to take evidence on both sides of the question of their selfishness, and then throw in a little consideration for the influence of their utter isolation and the folly of tourists and other visitors who have done much towards the destruction of that ideal state of unworldliness which characterised them only as far back as 1697, when they "contemned gold and silver as below the dignity of human nature."

A curious custom prevails of electing the most beautiful spinster on the island Queen of St. Kilda. She can, however, only fill this exalted functionless office so long as she remains single.

A little while back the inhabitants of a large Northern English town by some means or other got to know that the reigning Queen of Hirta was to be married on a certain date. A crowd of holiday-makers straightway chartered a steamer, and departed to witness the sight with something like a hundred pounds' worth of presents for the bride; but they were baulked of their pleasure, as the young woman's father would not allow his daughter's marriage to be made the subject of entertainment to a mob of vulgar Sassenachs; consequently the trippers had to return with their presents unpresented and their curiosity unfeasted. Such a wholesome assertion of dignity and denial of selfishness cannot be too highly praised; for from what I saw of the behaviour of some excursionists who visited the island whilst I was there, I have small doubt but that the old man's

estimate of the real object of the wedding-present folks was correct.

Whilst we were about on the different islands with the men, those who took anything to drink in the shape of milk or whey with them in the boat gave us freely of their beverage if our own supply ran short; and after they came to know

QUERN STONE.

what manner of man I was, some of them would not accept anything for specimen birds which they caught for me. Again, on the morning of my departure from the island, I was rowed to the steamer in the local boat along with a number of excursionists who had been paying a hurried visit ashore. When we got midway betwixt the land and the vessel, one of the St. Kildan rowers took off his bonnet and began to make a collection, as payment for the boat and men. I was putting a shilling into the hat when the man stopped me

and said that he wouldn't accept anything from me—I was one of themselves.

To sit on a boulder of rock in the strangers' gallery of a parliament, where all its members stand and speak at once in an unknown tongue, is a curious experience, which I have had the pleasure of indulging in. The St. Kildans meet every morning—either in front of one of their cottages or on the rocks below the storehouse—and discuss how they shall go about the business of the day. One or two of the debates, at which I was present, became so animated and the din so prodigious that I thought the matter must inevitably end in blows and bloodshed; but I was greatly mistaken, for after awhile some satisfactory understanding was arrived at, and they all went forth harmoniously to share the toil and danger of the day.

The cliffs of St. Kilda and the adjacent Isle of Doon are divided into lots, which change hands each year, so that everybody may in due course stand a chance of getting a fair share of birds and eggs. Those of Borrera, Soa, and the rock stacks are common property; and whenever they are raided the proceeds are divided amongst the members of the community, in order that the aged, widows, and orphans may receive a fair share. The profits of the boat are also shared by all the members of the Commonwealth.

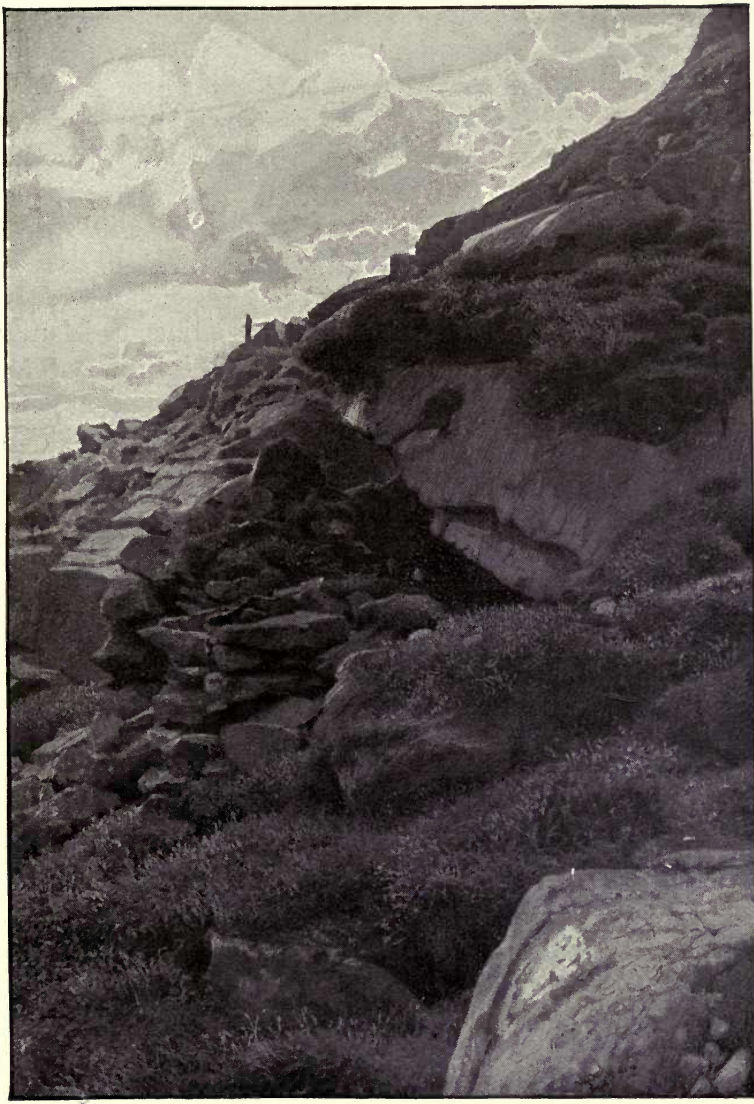
In several parts of the village we saw relics of bygone days in the shape of quern stones, in which the corn was formerly ground, and my brother photographed one standing, half full of water, on a low wall in front of a cottage.

In Martin's time they had but one steel and tinder-box in the whole place, and when the men made a journey to Borrera, or Soa, on wool-

gathering or fowling intent, the owner—for the fire-making tools were private property—used to levy an impost, called a "fire penny tax," of three eggs or one fowl from each man for striking a light. Our author, however, destroyed the value of this secret, and astonished the natives by showing them how to get a light by striking the blades of their pocket knives against a piece of "chrystal growing under the rocks."

They also had to pay a similar tax to the man who took his cooking-pot to these isles for general use.

Amongst other curious traditions rife among the natives is one to the effect that two men, named Dugan and Ferchar, whilst pulling heather for fuel on Oisaval, plotted a diabolical scheme to murder the whole of the inhabitants at one fell stroke. They rushed down the steep hillside and gave the alarm of an approaching fleet of warships, and as soon as all the people had assembled in the church for safety the two dastards set fire to a quantity of dry heather which they had placed against the closed door and smothered every soul except one old woman, who escaped by stealth to the rocks, where she managed to eke out an existence until the steward's avenging boat came the following spring, when she crept forth, to the surprise of the murderers, and divulged their black crime. Ferchar was placed on a rock-stack near Borrera to live on such birds as he could catch, or starve, but he chose to end his miserable career by flinging himself into the sea immediately after the boat that left him rowed away. His fellow-culprit, Dugan, was placed on Soa, where his bleached bones, and a dirk stuck in the ground beside them, were afterwards found in the cave represented in our picture, which is known to this day as Dugan's Cave.



DUGAN'S CAVE.

CHAPTER II.

THE BIRDS AND FOWLERS OF ST. KILDA.

THE cliffs of St. Kilda and its adjacent islands are of the most majestic description. The highest hill, Conagher, stands twelve hundred and twenty feet above the level of the sea, and on one side it plunges almost sheer into the ocean below, thus constituting, according to one authority, the highest precipice in the British Isles. I sailed under it twice, and walked—or, rather, crawled on all fours—along its edge, and can hardly tell which was the more wondrous and awe-inspiring experience.

Whilst climbing up and down some of the gigantic bulwarks of Hirta I was several times forcibly reminded of fearful nightmares when a boy, and do what I would I could not maintain an upright posture in some of the most fearsome places even when I had a perfectly safe footing. This fact may be laid hold upon by some student of Evolution as an interesting instance of an instinctive return to some remote ancestral method of progression. Anyway, I can safely aver that it felt a deal more secure.

When on the top of the highest cliff it was impossible to hear the surf beating at its foot. Parts of it are never visited by the daring fowlers, for the simple reason that they have no ropes

long enough to negotiate them. The St. Kildans are wonderful fellows on the crags, and most of the performances we saw them go through were done without the aid of a rope; but, of course, their bare feet, thoroughly hardened and inured to the touch of the sharp rocks, give them a great advantage over men who wear boots and socks every day of their lives. Their heads, too, being used to the dizzying heights from childhood are absolutely unaffected by any vertical depths however great.

The following is a list of the birds I saw and identified on the islands:—

Fulmar Petrel (*Fulmarus glacialis*).
Manx Shearwater (*Puffinus anglorum*).
Forked-tailed Petrel (*Cymochorea-leucorrhoa*).
Great Black-backed Gull (*Larus marinus*).
Lesser Black-backed Gull (*Larus fuscus*).
Herring Gull (*Larus argentatus*).
Common Gull (*Larus canus*).
Razor-bill (*Alca torda*).
Kittiwake (*Rissa tridactyla*).
Guillemot (*Uria troile*).
Black Guillemot (*Uria grylle*).
Puffin (*Fratercula arctica*).
Shag (*Phalacrocorax graculus*).
Gannet (*Sula bassana*). [*sima*).
Eider Duck (*Somateria mollis-*
Whimbrel (*Numenius phæopus*).
Oyster-Catcher (*Hæmatopus ostralegus*).
Dunlin (*Tringa alpina*).
Raven (*Corvus corax*).
Hooded Crow (*Corvus cornix*).
Starling (*Sturnus vulgaris*).
Wheatear (*Saxicola œnanthe*).
Rock Pipit (*Anthus obscurus*).
Tree Sparrow (*Passer montanus*).
Twite (*Linota flavirostris*).
Bunting (*Emberiza miliaria*).
Swallow (*Hirundo rustica*).
Wren (*Troglodytes parvulus*).

The Barn Swallow visited us once or twice, but only hawked round for an hour or so on each occasion and was gone.

The Whimbrel was dead, having been stalked by one of the natives and caught with his fowling rod—a very clever performance indeed when the shy nature of the bird is taken into consideration.

The Tree Sparrows are quite numerous for such a small place. I found five or six nests, all containing young ones, in holes in the stone walls and cliffs. I noticed one day, whilst out in a boat, a young Tree Sparrow taking his first lesson in the art of flying. He started from the face of an overhanging crag a couple of hundred feet high, and so weak and ineffectual were his wing-beats that he came down towards the cold blue water below, with his affectionate little mother flying round and round him in a series of spiral curves and greatly alarmed. At last he fell flop into the sea, and I thought it was all over with him. My heart was full of sorrow for the poor little fellow, as we could not reach the spot in time to save him. Just as I was reflecting upon the dangers to which young birds are subjected on leaving the nest, I was surprised to see the unfortunate fledgling rise from the crest of a wave, and by a tremendous effort fly to a jutting rock of safety a few inches above the tide-mark, where his mother joined him and showed a great deal of anxious solicitation for his welfare.

I observed that whenever the sun shone, which was not often during our stay, the Tree Sparrows would hop about in the grass of the field surrounding the village looking for flies and other winged insects, many of which they caught by a short hawking flight a couple of feet or so straight up in the air. After three or four of these pretty little vertical flutters they generally flew away to their nests with their prey.

Two or three great Black-backed Gulls from Lavenish—a bare rock upon which these birds breed close to the island of St. Kilda—were constantly hanging round Village Bay, waiting for anything they

could pick up either on the kitchen middens of the inhabitants in the very early hours of the morning before anybody was astir, or on the handbreadth of sandy beach later in the day. The first Sunday evening we were at Hirta I watched one through my binocular make his supper off a dead Gannet which came floating into the bay. His mode of procedure was somewhat odd. He swam round and round the dead bird several times in the most ceremonious fashion, and then went in to the attack with great ferocity. After he had made a hole in the body, and torn off several pieces of flesh and swallowed them, he again swam round and contemplated the richness of the treat that had fallen in his way. A few days after this I saw one of these birds trying to secure a sick or injured Puffin for his dinner. He hovered like the shadow of death over poor little "Tammy Norie" for a moment or two, and then made a rapid downward swoop towards it. His intended victim, however, apparently understood his tactics only too well, for directly he came too close the Puffin promptly dived and reappeared a considerable distance off. The Gull circled round and round, and after trying several times in vain to secure his prey by swooping down upon it, alighted on the water and endeavoured to swim stealthily within reach of the sick bird, but the latter never allowed him to approach too closely, and at last he gave up the chase and flew away. The St. Kildans dislike the Great Black-backs very much on account of their rapacity amongst the eggs and young of useful birds.

One fine morning I turned out at four o'clock and walked down to the beach with my field glasses. The first bird I fell in with was a Dunlin in breeding plumage. He was hard at work feeding, and

looked a very prim little fellow as he ran up and down the narrow spit of golden sand. It was quite amusing to watch him dash after the backwash of a breaker and make two or three hasty pecks on the very edge of the water before the next wave rolled in and chased him away. Sometimes he dallied so long over the plenitude of edible morsels that he was obliged to resort to flight in order to avoid being overwhelmed by the seething rush of waters. I saw a Dunlin at this same place on three separate occasions, and as my brother one day came across three birds together we concluded the species might be breeding on the island, and at once instituted a systematic search for a nest; but although it has been asserted that the bird breeds in St. Kilda, we failed to find any evidence of the fact.

Hirta and the Doon have been separated at some distant age by the continual wear and tear of Atlantic storms upon the rocks that undoubtedly once joined them together, and a westerly wind now drives the waves through the narrow gap with great force and uproar. I climbed down into this pass one afternoon in order to get close to the awful billows as they rolled in. The sight was sublime, and I sat fascinated for I know not how long watching the turmoil of waters leaping and thundering against the mighty crags. On the Doon side of this storm-worn breach the cliffs rise precipitously from the sea. Here and there I observed a Fulmar Petrel brooding on a narrow ledge in the utmost peace and security. It was a wonderfully pretty sight to see the male birds come to feed their mates. They never did this in a strictly business-like manner, but flew up and toyed round their sitting mates for a second or

two on their extraordinary wings and then glided gracefully away for some little distance, to return and do precisely the same kind of affectionate wantoning several times over before they delivered the dainty morsels they had brought.

On the St. Kilda side of the gap the rocks slope considerably, and towards the top the earth covering them is honeycombed by Puffin burrows. The owners of these subterranean nurseries were present in great numbers, and kept on flying uneasily past my spray-dripping form close down by the sea. I noticed that they always flew closest past me when facing the wind, and assumed that this was done in order to get a steadier and better view of their strange visitor. Whilst sitting at this spot I heard a faint tway, twaying, whining kind of note, something like that of a Robin Redbreast when her nest has been invaded, but could not for the life of me make out whence it proceeded. I examined all the ledges of black basalt opposite me with my field-glasses, but failed to discover anything to account for the strange sounds. This puzzled me considerably, but in a little while I solved the mystery. On a small ledge of rock in the mouth of a cave on my left I observed a little patch of brilliant orange colour appearing and disappearing simultaneously with the sound. It was the open mouth of a Black Guillemot standing—or, rather, crouching—breast towards me in such a position that I could not see the white patch on its wings. Presently this bird took to the water, and was speedily joined by two others of its own species. One of the new-comers and the bird I had been puzzled by evidently had a difference to settle, and straightway began as pretty a fight as I ever witnessed. They seized

each other with their beaks, pecked, splashed the water, and flapped round and round in small circles until one of them got worsted in the encounter and dived to escape. Although vanquished he seemed loth to give up the struggle, and returned again and again to the charge. No sooner, however, had he got close up to the foe than his courage failed, and instead of taking his punishment he dived straight under his adversary and came up a long way in his rear. After a while he seemed to acknowledge himself beaten, and took his departure.

Whilst all this was going on the third bird, which I judged to be a female, kept swimming quietly round the contestants; but when the struggle was over she joined the conqueror, and they remained together in tranquillity for a long while at the same spot.

During the afternoon I was joined by my brother, and together we descended a cliff not far away in order to examine a number of Fulmar Petrels' nests, which we judged to be accessible without the aid of a rope. By a very difficult and dangerous scramble, we managed to get down to the place where the birds were breeding. We inspected three or four nests, handling the egg in each and making a note of the pebbles and earth upon which it was lying. The natives of St. Kilda say that the sense of smell in a Fulmar is so keen that the bird will desert its egg if it has only been breathed upon by a human being. Whether there is any truth in this assertion or not I cannot tell, but curiously enough when my brother descended to photograph some of these nests a day or two afterwards he was dismayed to find every egg gone. As Fulmars' eggs are not gathered by the natives on the island of St. Kilda

their disappearance could not be accounted for in this way; and I think there can be but little doubt that they were forsaken through our interference, and afterwards eaten by either the Great Black-backed Gulls or Hooded Crows.

As I was anxious to procure a good picture of the war of waters in the gap I have just mentioned between St. Kilda and the Doon, it was arranged that my brother and I should walk over there one afternoon to take a photograph, and that a boat should afterwards pick us up and convey us to the latter island. We found it impossible to make a picture on account of the showers of fine spray which were being driven through the defile, blurring the lens of our camera the moment it was exposed.

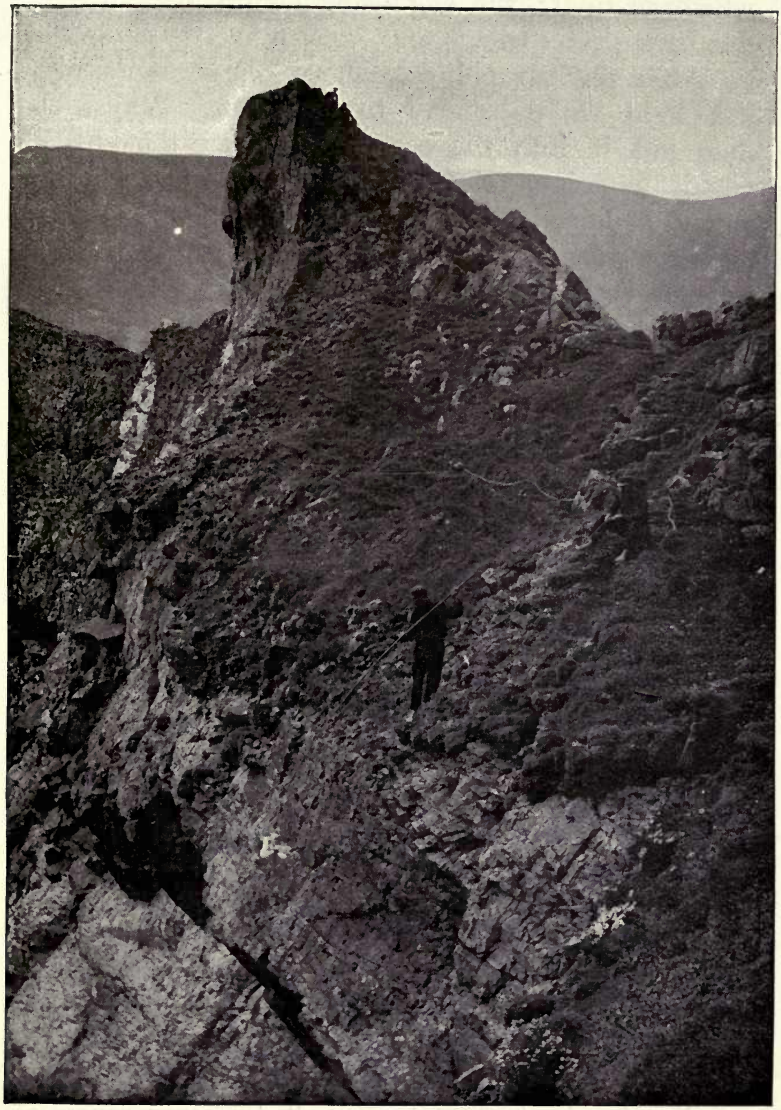
In a little while the boat hove in sight, and we took off our boots and descended the slippery rock to embark. Seeing a chance of some fun with big Finlay McQuien, who turned out to be one of the rowers, I tied my boots together by the laces, and having no fear of their sinking on account of one of them being composed largely of cork—a necessity caused by an early climbing accident—I purposely threw them short of where he stood in the bows of the boat ready to make a catch, and they fell with a splash into the sea. Poor McQuien! I shall never forget his look of alarm at what he supposed to be a very awkward accident, nor his astonishment when he saw the cork boot float and support its companion in the water. When he recovered them he squeezed the former, rolled up the whites of his eyes, and exclaimed, "Vary khood, vary khood!"

After a deal of difficulty we managed to jump into the boat, which was jigging about like a cork

in a whirlpool on account of a heavy ground swell and the rush of a current which came from a cave close by. In a few minutes we landed on the Doon, and hauled our craft high and dry upon a rock, which was almost as steep as the roof of a house.

We climbed to the top of the island, and then along its narrow serrated ridge until we came to a place where Finlay McQuien and his companion could show us an example of their skill with the fowling rod. My brother descended to the very brink of an awful precipice, and getting his camera into such a position as to command a view of a number of Fulmar Petrels sitting on a narrow ledge of rock, waited for the fowlers to descend. Finlay Gillies tied a rope round the body of McQuien, who stealthily crept down, rod in hand, until he came within reach of the unsuspecting birds, when he quietly pushed the instrument forward till the open noose at the end was just in front of the head of the one he had selected for his victim. By a dexterous twist of the wrist the fatal circle of horse-hair and Gannet quills fell round the neck of the Fulmar, which instantly spread out its wings and sprang forward, only to tighten the noose, and by its fluttering frighten all its companions away. As the bird was being brought up the picture on the opposite page was taken. The two small figures on the top of the high pinnacle of rock in the illustration represent our friend Mr. John Young and myself, who were watching the sport from this Dantesque coign of vantage.

In retracing our steps along the summit of the island we discovered a Forked-Tailed Petrel's burrow containing several nests. We examined two of these, and found that whilst one contained quite a liberal



FINLAY McQUIEN CATCHING FULMARS.

lining of dead grass, the other had no materials whatever in it; the egg being simply deposited on the bare peat earth.

After photographing a Manx Shearwater's nesting hole we descended to our boat. Whilst the men got it into the sea my brother thought he could negotiate the steep and slippery rock running down to the water's edge alone, but he had not gone far before he fell as suddenly as if he had been walking on an inclined plain of ice, and shot down towards the ocean at a terrific pace with his camera, which he had held under his arm, after him. The latter struck against a small projection of rock and stopped, but its owner continued his wild career until he came to a kind of natural basin full of water, just left by the receding tide. Here he stopped all in a heap with considerable abruptness and a big splash. I could not help laughing when I saw him strike out, under the impression that he had actually landed in Village Bay. He scrambled cautiously back to his camera on his hands and knees, and after carefully examining the apparatus for hurts, he told me that the dizzying effect of the fall, and his quick transition seawards, made him confident on feeling the cold water that he had arrived in the ocean, and he began to strike out in order that he might get away from the rocks and the surf and swim towards the place where the boat was being launched.

Satisfied with our adventure we remained where we were until McQuien came along to help us down to the place of embarkation.

As the boat was too small to carry seven of us with safety we shipped my brother and Mr. Mackenzie over to St. Kilda, and afterwards the minister, Mr. Young, and I went a-fishing for

Pollack, or whatsoever else would give us an opportunity of hooking it.

No sooner had we got our troll-lines out, with their little red indiarubber sand-eels spinning bewitchingly at the ends as the men rowed steadily alongside the rocks, than I felt a mighty tug at mine. "A monster, by George!" thought I, and fearful of losing him tightened my hold upon the line. This was a fatal mistake, for it instantly parted, and my fish went off to consider, in the quiet of some dark cave many fathoms below, the baseness of the imitation he had secured.

Fortunately, the minister had a spare line on board, which he kindly lent me. It was baited with a real sand-eel, which had been captured in a despisable trickle of water running from the side of Conagher into the bay, had its skin taken off to make it look conspicuous, and then been lashed with white cotton thread to an artfully-concealed hook.

I had not had this line out more than half a minute before I felt another exhilarating jerk. The fish I had hooked plunged and kicked like a newly-haltered colt. I played him carefully for a while, and when I judged he had run the measure of his strength gently hauled him in. Directly he came alongside the boat, however, he bethought himself of his almost lost liberty, and with an angry slap of his tail rolled over and disappeared beneath the craft. I slacked the line instantly lest he should saw it in two across the keel, and he promptly dived. After another short tussle I worked him back to the side of the boat, where he lay on the surface of the water with his mouth wide open. Holding the line in my right hand I plunged my left into his gills and hauled him on board. He was a Coalfish weighing about twelve and a half pounds.

Mr. Fiddes caught a good-sized Pollack and one Coalfish before a monster of some sort broke his line, and left us with the single one which I was using.

I now requested Mr. Young to take a hand at my line; but he would not touch it, declaring that, old sportsman though he was, the fun of watching my boyish pleasure and excitement was more to his liking than even the fishing itself. I caught several splendid fish in quick succession; and Finlay McQuien grew greatly alarmed at the way I was spoiling my clothes by dragging the voracious creatures over the gunwale of the boat. Once I had no sooner disengaged a fish and dropped the bait overboard, than another rose and snatched it before the leaden weight on the line had actually touched the water. Directly he discovered that all things are not quite what they seem he dived with a tremendous rush. The suddenness of the jerk made the line spin through my hand so fast that my fingers were hot with the friction.

By the time we reached the end of the Doon, the bottom of the boat was covered from stem to stern with dead fish of all sizes. My bootless feet and legs were wet and cold to the knees, but I was entirely oblivious of any feeling of discomfort whilst the sport lasted.

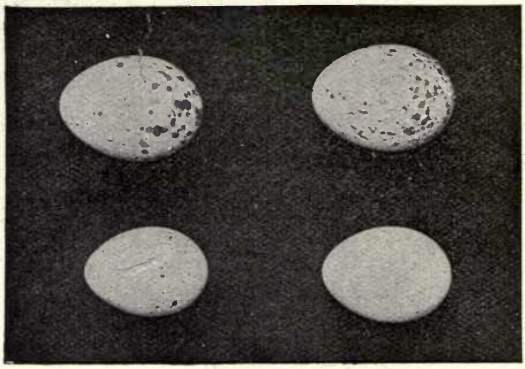
After fishing for a little over an hour, we rowed homewards across the bay. I kept the minister's catch separate; and when I counted my own upon the beach, I had seventeen Coalfish of an aggregate weight of something between one hundred and eighty and two hundred pounds.

News was sent up to the village that there was plenty of fish on the beach for everybody, and a number of boys quickly trooped down to the landing place for a share. Before any part of my catch

A GOOD CATCH.

was taken away, however, I sent for my brother, and although it was very late in the evening he managed to photograph me and my trophies.

When Sandy Campbell saw the boys dragging the fish past our cottage, he told me that he recollected the time when the St. Kildans would not eat it, as they said it had no substance (oil) in it. They simply took the liver out of such as they



WRENS' EGGS.

The upper and larger eggs are those of the St. Kilda Wren, the lower ones are those of the Mainland Wren.

caught, and either cured the body for exportation or threw it to their dogs.

Whilst in Hirta I gave one bird particular attention, on account of the controversy which took place some years ago as to its claims to be considered a distinct species; and as I do not know any of the disputants except by repute, what I here put down may be taken as entirely unprejudiced either way. I refer to the Wren (*Troglodytes parvulus*) met with in St. Kilda. It may be worth while to mention before going any further that I have been familiar with every note, movement, and attitude of its mainland representative

all my life, as such experience naturally affects my value as an observant witness.

I procured an adult male in St. Kilda, and found that it measured, from the point of its bill to the tip of its tail, exactly four and a quarter inches, and a specimen of the same sex in the South of England which was four inches in length. The beak, legs, toes and claws of the St. Kilda bird are a trifle stronger and lighter in colour, and the plumage generally much paler and more distinctly marked. This is especially noticeable on the back, which is barred transversely with greyish and dark brown where the mainland bird is reddish brown with indistinct bars of a darker hue.

Its carriage and appearance are somewhat different, as it rarely, if ever, cocks its tail at that acute angle so characteristic of the Common Wren. In fact, it more often carries it as much depressed as that of a quiescent Meadow Pipit, even when singing. Its song is of about the same duration as that of the mainland bird, viz. from five to six seconds; is louder, less metallic, and much oftener uttered on the wing. I sometimes heard it within a few inches of my ear whilst standing perfectly still in a cleit for purposes of observation. I never once heard that familiar jarring note of alarm or anger so common in other parts of the British Isles where Wrens are to be met with.

I examined five nests, two with eggs in, one lined with feathers ready to receive them, and two "cocks' nests." Both the latter I found myself; and as I had very good reason to believe that neither of them had been touched by human hands, I measured the aperture in each, and found it to be one and five-eighth inches in horizontal diameter;

whereas the hole in similar nests examined in England is generally not more than one and one-sixteenth. I did not take any measurements from the nests with eggs in, as they had been investigated by large rough fingers, which had, of course, destroyed the scientific value of anything in the way of horizontal diameter. The nests are larger,

ST. KILDA WREN.

constructed of rougher materials, and not so neatly made as those of mainland Wrens.

The eggs, although subject to the usual amount of variation in point of size, run larger, as will be seen from the illustration on p. 70, which has been prepared from a carefully-made photograph taken life-size with the camera directly over them, for purposes of comparison. My friend Mackenzie told me that although he has examined quite fifty nests during the time he has visited the island in the capacity of factor, he has never yet seen one

containing more than six eggs. I have found nests in Yorkshire on more than one occasion containing seven and even eight.

For purposes of comparison, we have also made a photograph of a mainland fledgling Wren of about the same age, and give the pictures herewith side by side.

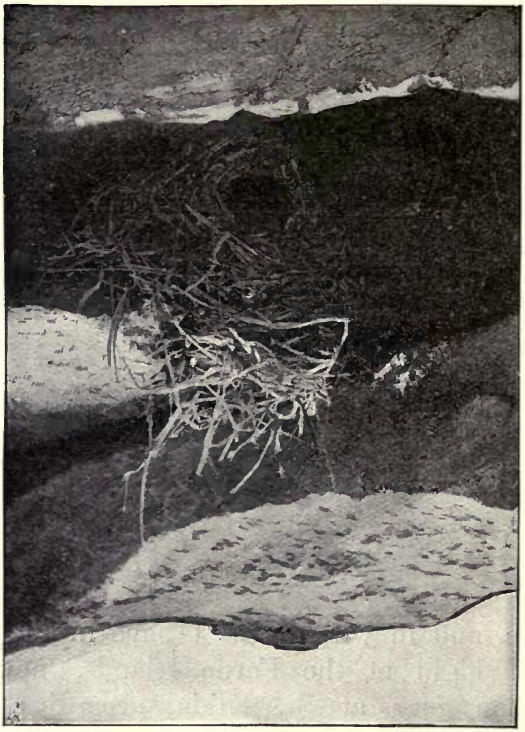
Curiously enough the Eider Duck, whose average clutch is said on very good authority to number

MAINLAND WREN.

five eggs, and in whose nest I have myself seen as many as eight at the Farne Islands, never lays more than four at St. Kilda, according to the natives, one of whom showed me a clutch with that number in it.

During the third week in June we did not see a single young Wren in St. Kilda, where such eggs as we had shown to us were quite fresh; but in Soa, which is only separated by a narrow channel, young birds were flying about the rocks almost as strongly as their parents. We succeeded in laying hands upon one, the adventurous particulars

of whose capture will be related when I come to deal with our visit to Soa. My brother fixed up his camera and focussed the corner of an advantageously-situated crag, and when he had got his plate in and all ready, I quietly placed the bird upon it and kept my hands over the little



NEST OF ST. KILDA WREN.

creature until he was composed, then counting one, two, for my brother's signal, I swiftly withdrew. The pneumatic tube was instantly pressed, and the photograph, from which the accompanying picture has been made, was taken.

Every Wren's nest we found, or had shown to us, was located inside a cleit; and, as may well be

imagined, a situation over the door-lintel of one of these dark structures did not lend itself readily to picture-making. To get over the difficulty caused by an almost entire absence of light, my brother fixed a looking-glass at such an angle inside the cleit that it reflected the rays of light coming through the little doorway backwards and upwards on to the nest. I then went outside, and with another mirror threw the sun's rays upon the looking-glass inside. By this means my brother was able to focus the nest and some of its surroundings. No sooner, however, had this difficulty been got over than another presented itself. The dark slide containing the sensitised plate could not be got in and arranged for exposure on account of the position of the nest and the narrowness of the cleit. This was extremely awkward, but we surmounted it by carefully noting the position of each of the legs of the tripod and then marking the exact position of the camera with a lead pencil on the stones of the side wall against which it was actually leaning. It was then removed, the slide introduced, and shutter drawn out ready to expose the slide, and the whole put back into the register formed by the pencil marks. A long exposure and several intermittent gleams of sunshine produced the picture here given.

We arranged an excursion to Borrera, and as soon as a favourable day occurred, started, after listening without understanding a single word of a prolonged debate amongst the men and the tiresome wrangling of their dogs. As we neared the island the scene became simply magnificent. The air above and around us was thickly peopled with thousands upon thousands of Gannets of different ages, as could easily be seen from the wonderful

variation in the colour of their plumage. Some of the birds were flying straight along on the business of nest-making intent, whilst others wheeled idly round and round in order to satisfy their curiosity by making a leisurely survey of us and our boat. As far as the eye could see small objects, the sea was covered in every direction by a vast throng of Puffins, Guillemots, and Razor-bills, many of which gazed in bewildered astonishment at us until the bows of the boat got quite close to them, when they dived with the swiftness and silence of thought and were gone. In front of us stood Borrera sternly guarded by its dark bulwark of forbidding crags, from the topmost edges of which brilliant green slopes of great steepness ran upwards until they were lost in the trailing skirts of a luminous white cloud. To our left was Stack Lee, a gigantic pillar of rock rising about three hundred feet out of the ocean. Its sloping upper parts and every available ledge and corner were positively white with Solan Geese sitting on their nests. Such a snow-like mass do these birds present, that we were told on a fine day the Stack may be distinctly seen from Long Island—a distance of forty miles.

When we neared our destination the swell was breaking so badly upon the rocks that we had considerable doubts as to whether we should be able to land. A dog we had in the boat evidently thinking that he, at any rate, was equal to the task leapt overboard and tried. He easily reached the rocks, but every time he attempted to land the heavy backwash tore him away, and he would inevitably have been drowned had not one of the men seized and dragged him into the boat again.

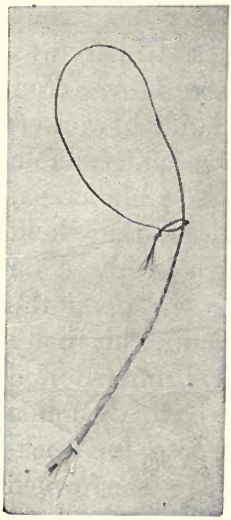
After a great deal of manœuvring, accompanied by much excitement on the part of the crew, a

young man had a rope tied round his waist, and went forward to wait for a favourable opportunity to leap ashore. The rope is always used as a safeguard in case of accident. Two men succeeded in effecting a landing, but the place was considered so dangerous that the rest of us were taken to another part of the island, where it was hoped the swell would be less boisterous. The new place selected was probably a little more sheltered from the waves, but in spite of this it was very dangerous on account of the steep, sloping rock which was covered with the most slippery sea-weed I ever trod upon. The men we had already landed worked their way along what appeared to be untreadable ledges and round the corners of impassable crags, and flung their rope-ends to us. Whilst they held the boat from drifting away, and two of those on board prevented her from being stove in upon the rocks, Finlay McQuien tied a rope round his body and sprang ashore. My brother and I now doffed our boots and donned each a pair of coarse woollen socks, which we had bought on purpose for rock-climbing, and prepared to leap. He performed the feat first, and then had his camera and plates sent up to him by a method which he devised himself, and is, I think, worth while mentioning for the benefit of other photographers on account of its absolute simplicity and the security it affords frail and costly apparatus. The camera is tied to the middle of a long rope, one end of which is thrown to a man ashore and hauled in by him, whilst the part behind the apparatus is being paid out in such a way as to keep the whole taut, and thus prevent the camera from swinging or touching the rocks.

When it came to my turn to face the rocks the men looked afraid to take me up, and I must

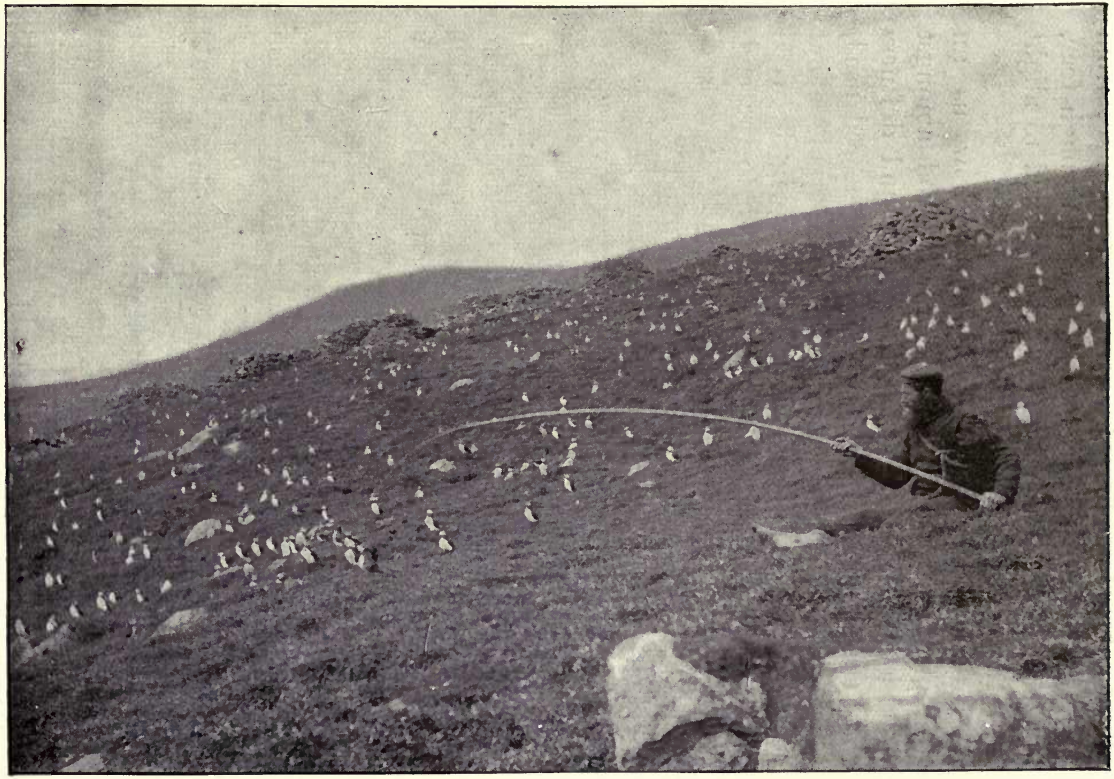
confess frankly that I felt afraid to go. My brother strongly advised me to stay where I was, but this was impossible. I have many times been accused of foolhardiness, but never once of cowardice; and I could not bear to think that I lacked the necessary courage, so promptly leapt ashore to prove to my own satisfaction that I didn't.

We trudged up the steep cliff, clambering from ledge to ledge and from boulder to boulder, until we came to where the turf clothes the island. Here the Puffins breed in immense numbers, and the clouds of birds that swept past us made a sound like a whirlwind whipping a great bed of dead rushes. As the Forked-Tailed Petrels also nest regularly at the same spot, we began to grope about in the burrows for their eggs. I had not investigated more than two or three holes before I felt a peculiar stinging pain, and precipitately withdrew my hand, streaming with blood. I had invaded the nest of a Tammy Norrie by mistake, and the owner being at home naturally objected, and administered with great promptitude what she no doubt regarded as a well-deserved punishment for the intrusion. I used to be a little sceptical about the stories of Puffins evicting rabbits from their burrows, but must confess that the back of my unbelief was broken that day on Borrera.



PUFFIN NOOSE.

The men found several Forked-Tailed Petrels in their nesting-burrows, and when they were taken



FINLAY McQUIEN CATCHING PUFFINS.

out the gentle little things squirted quantities of oil, varying in colour from amber to orange, from their beaks. It appeared to be ejected through fear, and smelt very strongly when it happened to alight on any part of one's clothing.

Finlay McQuien now began to show us an example of his skill with the fowling-rod amongst the Puffins, which need far more care and deftness to capture than the Fulmar Petrels. The rod used, however, is just the same: a light deal pole about thirteen feet in length, with a hazel twig between two and three feet in length lashed on to the end. To this is securely fastened a running noose of horse-hair and Gannet quills, so cunningly plaited together as to resemble the tapering lash of a carriage whip. The effect of the interwoven quills is that whilst preserving a sufficient amount of flexibility they so stiffen the noose as to make it stand up in the form of an almost perfect circle. The piece of hazel is slightly curved so as to slide easily along the ground, and at the same time elevate the noose sufficiently to enable the fowler to slip it over the head of a bird by a dexterous turn of the wrist. The St. Kildans, one and all, seemed to exercise a kind of uncanny fascination over the Puffins, which they caught one after another with the utmost ease. The whole procedure appeared to be simplicity itself, and as I am considered a deft hand with a trout-rod I essayed the task. Creeping up cautiously on my hands and knees I slipped the rod stealthily along in front of me, but to no purpose; the birds would not tolerate my approach and flew away. I tried again and again, but the noose either waggled about until it scared the foolish-looking little creatures away, or I miscalculated my distance

when endeavouring to entangle a victim. Several times an angry Tammy Norie seized the noose in his beak and dragged at it until he so lessened the size of the circle as to make me despair of ever getting it over his head. Each failure amused the natives immensely, and they laughed heartily at my expense. However, this only increased my determination, and after a deal of perseverance I succeeded in capturing a bird, to the great delight of my spectators.

So successful are the St. Kildans at this kind of sport that Angus Gillies once bagged to his own rod no less than six hundred and twenty Puffins in a single day.

In the course of our wanderings on the island we came upon the half-underground dwellings in which the men and women live when they visit the place to pull the wool off their sheep or snare and pluck birds. They are odd kind of houses—very dark, uncommonly damp, and weird to a degree—and seem as if they had owed their existence to the first glimmerings of human intelligence. In shape and general appearance they are much like a cleit half-buried in the steep hill-side.

There is a small doorway, through which those using the house are obliged to creep on hands and knees; the fire-pit is half-in and half-out of the house, and the place is illuminated by a stone lamp. I examined this remarkable relic of antiquity with considerable interest, and it appeared to me to have been carefully chosen for its peculiar accidental shape rather than made. It had a hollow in the middle for the reception of oil, and a narrow crevice or gutter running upwards from it to one end for the accommodation of the wick. It was blackened with smoke, and the damp stood upon it

in great glistening beads. The St. Kildan visitors sleep on a raised platform covered with straw.

The position of the fire-pit, which is considerably below the level of the floor of the house, is very ingeniously contrived so as to admit of a certain amount of light and heat and yet not have the burning fuel unduly interfered with by the wind. The fire is practically outside the house, but the earth is so piled up around that it rises above the aperture in the wall and forms a kind of chimney, thus preventing the smoke in ordinary weather from being blown inside the house.

There is a somewhat similar structure in St. Kilda known as "The Strong Man's House," on account of the fact that it was built in a single day by the unaided efforts of one man, whose great physical strength is testified to by the huge stones he used in its construction, and whose handiwork is a treasured wonder of all the St. Kildans.

Whilst exploring the interior of one of these temporary dwellings a young man pulled an old worm-eaten wooden ladle from a hole in the wall, and explained that it was used for dividing porridge amongst those who came to work on the island for a while. The condition of the utensil did not set me longing madly after Borrera porridge.

As we sat chatting in semi-darkness it suddenly occurred to Finlay McQuien to ask me, through a younger man who could speak English, to tell them something about London. As they are all so good in St. Kilda I knew it was of no use entering the great metropolis in a competition of that kind, so went at once to the opposite extreme and told the most dreadful stories I could remember or invent of pickpockets and

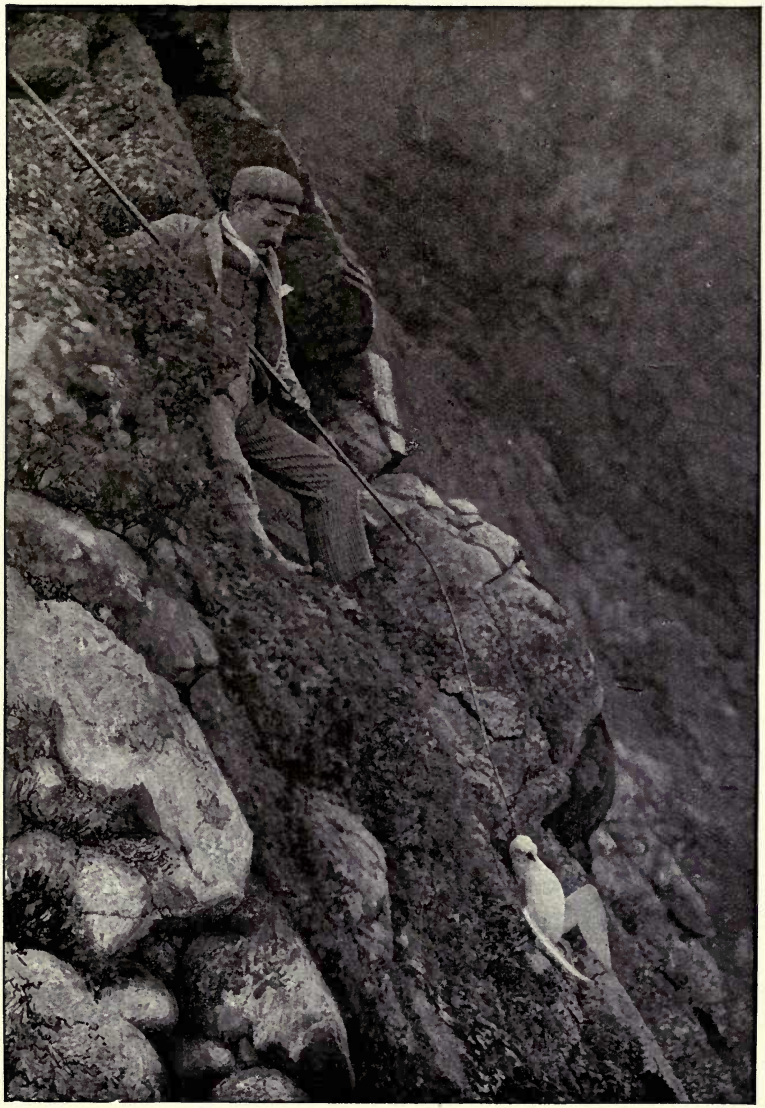
THE STRONG MAN'S HOUSE.

other bad characters, and showed McQuien what they would probably do to him if he ever happened to wander so far south. This fetched him, with a vengeance. He seized a lump of timber lying close by, put himself in a slaying attitude, rolled his eyes to heaven, and showed his fine set of pearly-white teeth in imitative rage. I was greatly pleased with the effect I produced, but fear I have sown the seeds of a bitter harvest for any member of the Fagin brotherhood who may happen to cross the path of the champion cragsman of St. Kilda.

In descending from the semi-underground dwellings I noticed three or four strips of ground, about two feet wide and twelve feet long, with the sod cut out and turned wrong-side up. The cuttings ran straight up and down the steep hill-side, and upon inquiry I discovered that they had been made by the members of a party which had recently been staying upon the island as a signal to their friends on St. Kilda that the work which had occasioned their visit had been done, and they were ready to be taken off. If anybody should fall ill whilst sojourning on Borrera for more than a day this signal, or a fire lighted on the open hill-side, is used to warn the St. Kildans at home that something is wrong and that the boat is wanted. During the time friends are absent from home on a prolonged wool-gathering, or bird-catching, expedition, daily watch is kept from the top of the hills behind St. Kilda village for any signals which they may make for assistance.

By-and-by we were joined by the other members of our party, each of whom seemed to come from a different quarter of the island, laden with Fulmars and Puffins.

The ground officer's eldest son, Mr. A. Ferguson,



FERGUSON FOWLING ON BORRERA.

who a year or two back forsook the lone crags of St. Kilda for the more lucrative and less adventurous life of a Glasgow commercial house, happened to be at home on a holiday at the time of our visit, and we persuaded him to accompany us to Borrera, as he was not only an intelligent and genial companion, but also very useful in interpreting for us in the absence of our friend the factor, who could not go out that day. He was desirous of seeing whether his hand had lost its cunning with the fowling-rod, and one of the men accordingly fastened a rope round him and paid it out from a sure footing as he disappeared over the brink of a fearful precipice. I crawled on my hands and knees to the edge of the cliff, and was astonished to see him pass the noose over the head of a Fulmar and take her off her nest with so much skill and deftness that other birds sitting close around did not appear to be at all disturbed by the fate of their neighbour. Their conduct in this respect was totally unlike that of the birds we had watched under similar circumstances on the Doon.

By the aid of a rope my brother got into a very hazardous and awkward situation, from which he managed to take a photograph of the ex-fowler in the holiday war-paint of Buchanan Street.

As we descended to the place of re-embarkation, I could not make out why the two men who were along with me got into such a state of excitement, but presently learnt that their anxiety was lest I should spoil my trousers by my peculiar method of progression. They were highly amused when I explained to them, through a lad who overtook us, that my concern for the safety of my neck was so great that I had absolutely none left for my garments.

Just as I was congratulating myself upon having got down to the water's edge again in safety, and doffing the climbing-rope I had had attached to my shoulders for safety, it was announced that we could not possibly re-ship at the place where we had landed, on account of the tremendous ground-swell. My heart sank within me when I looked up at the awful detour we should be obliged to make in order to get to a place where the conditions for embarkation would be more favourable. The thing looked impossible. After travelling in a slanting, upward direction for some time, we came to a narrow ledge, along which we cautiously crept, with the sea boiling and thundering a couple of hundred feet sheer beneath us. I had had a rope attached to me all the time, but my brother refused to have any safeguard of this kind, deeming himself capable of going wherever the St. Kildans went under similar conditions; but when we came to a great yawning chasm in the rock which had to be leapt, they appeared to recognise their own responsibility in the matter, and quietly lassoed him from behind. In order to make assurance doubly sure in my case they tied two ropes round me, and, when I jumped, one was held by a man who had already crossed the chasm, and the other by one who had not yet done so. The side upon which I landed was lower than that from which I leapt, and the sting of alighting upon hard rock without boots on one's feet is something to be remembered for many a day.

We had not gone far along this awful path before I discovered a dead sheep wedged betwixt two crags. It had no doubt been blown from the heights that towered against the blue sky far overhead. I was anxious to examine it from a natural history point

of view, and induced my guide to slack the rope between us in order that I might do so. As I expected, the Ravens or Hooded Crows had pecked out both the unfortunate creature's eyes.

A little farther along I heard a curious noise proceeding from an immense horizontal fissure running parallel with the ledge along which we were travelling. The thing puzzled me, and I could not resist the temptation to crawl in and investigate the cause. I found the crevice tenanted by a colony of Shags, whose young ones were crying lustily for more fresh fish.

After some difficulty and danger, we managed to half-leap and half-tumble into the frail old boat, which a month or two later—according to a letter I had from Finlay McQuien—went to splinters on the rocks during a gale.

Martin's first experience of the birds at St. Kilda was gained near Borrera, and his own account of what he saw is worth quoting. He says:—"We put in under the hollow of an extraordinary high rock (Stack in Armin) to the north of this isle (Borrera), which was all covered with a prodigious number of Solan Geese hatching on their eggs; the heavens were darkened by their flying over our heads; their excrements were in such quantity that they gave a tincture to the sea, and at the same time sullied our boat and clothes. Two of them confirmed the truth of what has been frequently reported of their stealing from one another grass wherewith to make their nests by affording us the following very agreeable diversion, and it was thus: One of them, finding his neighbour's nest without the fowl, lays hold on the opportunity and steals from it as much grass as he could conveniently carry off, taking his flight towards

AT THE FOOT OF THE CLIFFS, BORRERA.

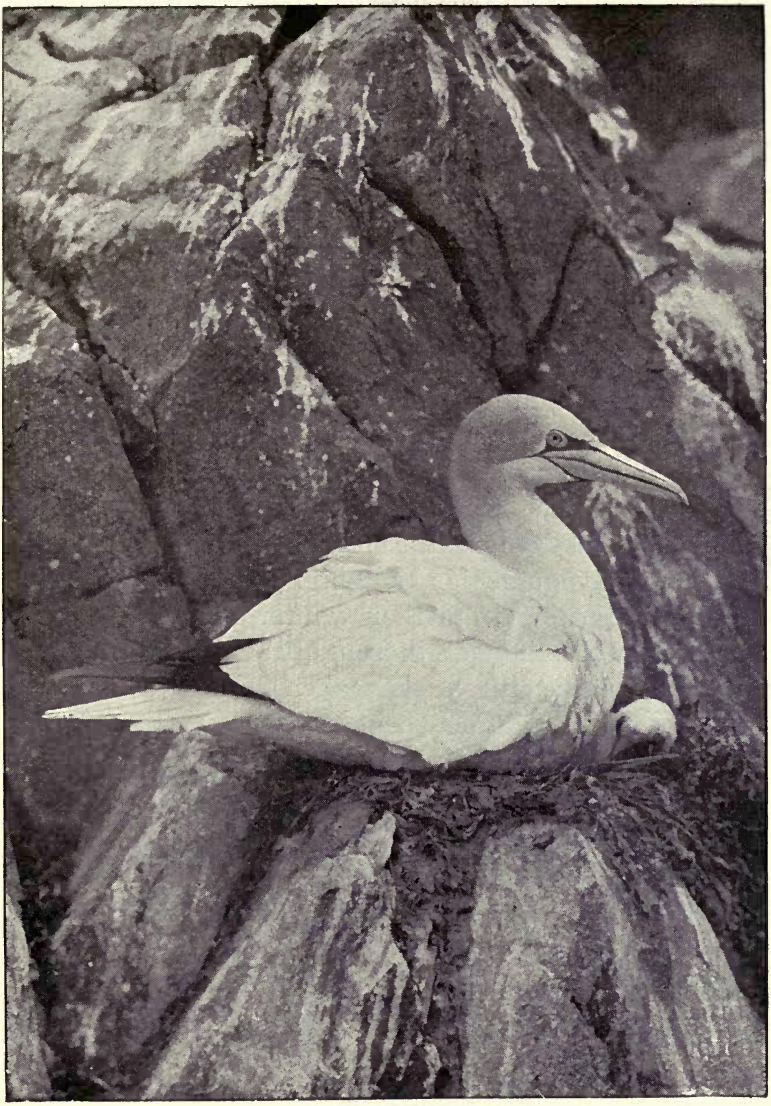
the ocean; from thence he presently returns as if he had made a foreign purchase, but it does not pass for such. For the owner had discovered the fact before the thief had got out of sight, and too nimble for his cunning, waits his return all armed with fury and engages him desperately; this bloody battle was fought above our heads, and proved fatal to the thief, who fell dead so near our boat that our men took him up and presently dressed and eat him, which they reckoned as an omen of good success in the voyage."

Although we saw plenty of Solan Geese building their nests, we were not treated to anything in the way of examples of petty larceny and bloody justice which seem to have supplied our rather sanguinary-minded old friend Martin with what he frankly calls a "very agreeable diversion."

Martin says that he made particular inquiry as to how many Solan Geese were killed and eaten in St. Kilda in a year, and found that in a bad season no less than twenty-two thousand five hundred had been caught and consumed. Both the people and the birds appear to have been more numerous then than now.

One authority has estimated the number of Gannets breeding on the St. Kilda group of islands at two hundred thousand, and computed their summer consumption of fish at two hundred and fourteen millions, adding that the sight of the birds resting on Stack Lee is "one of the wonders of the world."

The Solan Geese return to their breeding quarters on Borrera and the adjoining rock stacks in March, about the middle of which month the St. Kildans go forth in their boats to raid the sleeping birds under the cover of darkness. According to Sands, the foray is managed in the following way:—"Two



GANNET AND YOUNG.

men fastened at either end of a rope ascend the rocks, and on all-fours crawl along the ledge where the geese are resting. The latter have always a sentinel posted, who, if he thinks all is well, cries, 'Gorrok! Gorrok!' on hearing which the fowlers advance; but if the sentinel cries 'Beero!' the men remain motionless with their bonnets drawn over their brows, and their faces on the rock. If the sentinel fancies it was a false alarm, and again cries 'Gorrok!' the first fowler progresses until he is near enough to grasp the sentinel and twist his powerful neck. The sentinel gone, the whole flock falls into a state of panic and bewilderment, and crowd upon the man on all sides. He has nothing to do but despatch them. But it sometimes happens that the whole troop take flight with a 'Beero! harro! boo!' when the men have to crawl back without any game for that night."

On returning from their winter quarters the birds are allowed to get thoroughly settled down on their usual roosting rocks, when a dark calm night is chosen for raiding them.

If the sentinel gives the alarm, and the birds fly off, they sometimes assail their would-be captors in departing, and the men have to look out for the safety of their eyes. Caps and mufflers are occasionally carried off by the angry Gannets.

During our stay Willie Macdonald caught an old male bird whilst he sat asleep on Borrera in broad daylight. The young Gannets are killed in September.

Guillemots are also caught at night, but in a totally different manner. About three weeks after the birds have returned to their breeding quarters on the rocks they are suddenly driven away from a number of favourite ledges late one evening, and

long before dawn the following morning a man is lowered to each. Here he sits, motionless as a statue, and at the first suggestion of daybreak the birds stream up from the sea and alight upon him, thinking he is a rock, and are promptly secured and killed. As many as a hundred may be killed in this way in an hour, I was told, by one man alone. Directly it becomes light enough to distinguish the fowler from a rock, the birds steer clear of the ledge on which he sits and he is hauled up.

Our old friend Martin says that he was told by the steward "that a red-coat had been found in one Solan Goose's nest, and a brass sun-dial, an arrow, and some Molucca beans in another."

One writer mentions that while on a voyage to St. Kilda, the boat in which he was travelling was sailing at a great pace before the wind, when a Gannet, having marked a fish just in front, stooped and drove its powerful beak through the bottom of the vessel, breaking its neck in the collision.

When we finally left St. Kilda on board the *Hebridean*, we were told that the captain intended to steam round by Stack Lee in order to give his passengers a sight of the birds upon it. As the boat came abreast of the towering rock, some members of the crew loaded and ran out a small brass cannon. The tip of a red-hot poker applied to the touch-hole of the gun produced a deafening explosion, which seemed to be instantly flung back at us by Stack Lee, and then thundered and reverberated from crag to crag along the rocky sides of Borrera, sending a great white cloud of startled Gannets into the air above us. Yet in spite of this vast multitude wheeling round and round, and rising slowly higher and higher, the birds on Stack Lee

had suffered no apparent diminution in numbers. When we had steamed round to the opposite side of Borrera and a considerable distance away from it, I witnessed one of the most curious sights it has ever been my good fortune to behold.

A gleam of sunshine fell between two immense pinnacles of rock, causing a great ray of bright light to descend obliquely to the sea, very much like a shaft of morning sunlight penetrating an empty room through a notch-hole in a closed shutter. The Gannets returning to their nests, could be plainly seen wheeling and dancing in this ray of sunshine, like atoms of white dust.

GANNETS.

CHAPTER III.

THE BIRDS AND FOWLERS OF ST. KILDA (*continued*).

WHILST sitting on the rocks round Village Bay watching birds through my field glasses, I several times observed the curious behaviour of the wind on the water during squally weather. It would descend from the hill-tops round about, and striking one particular spot spread out in an almost perfect circle, producing an effect very similar to that of a stone cast into the middle of a placid pool.

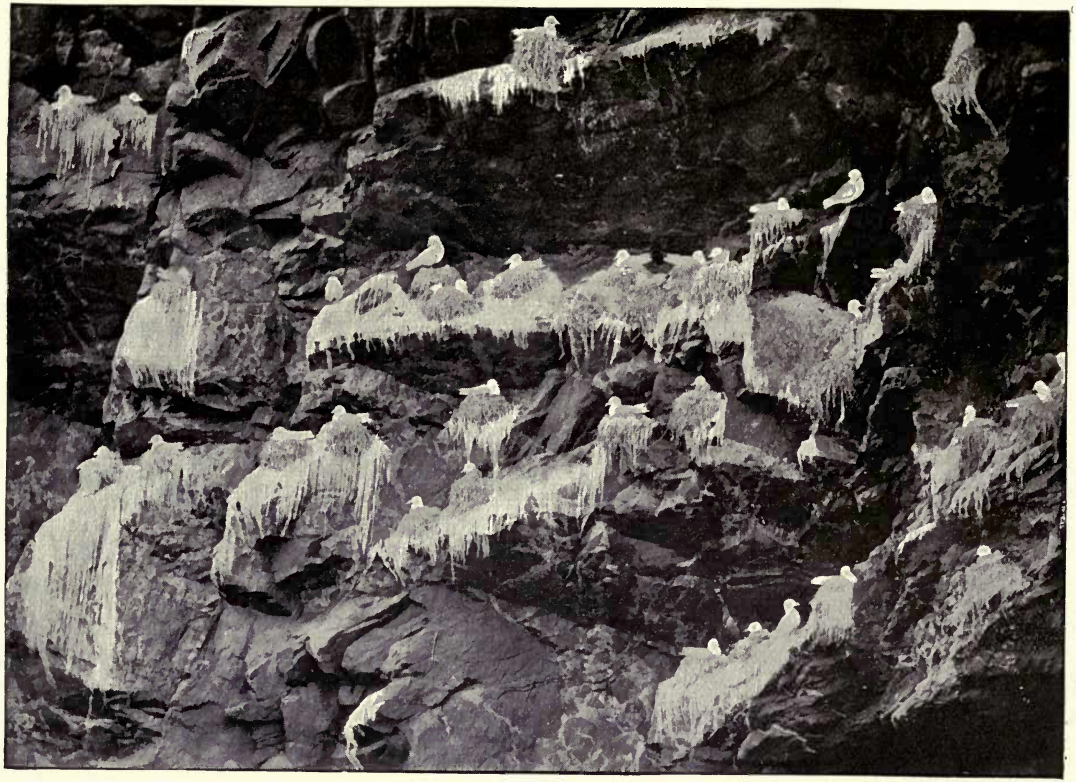
Of the dangers of squally weather at St. Kilda we had heard a great deal, but certainly never dreamed that we should soon have such a very disagreeable example of its treachery as to make us doubt seriously whether we should ever live to tell the tale of our experiences.

It came about in this way. We had been unable to do any photographic work one rather blustering, showery day, and as the weather cleared up, and apparently became quite settled towards evening, young Ferguson invited my brother and me to go fishing with him in Village Bay.

We commenced operations by the gap dividing St. Kilda from the Doon, and rowed quietly along, hugging the shore until we came to the end of the latter island. As we put about to pull back I noticed a black, ominous-looking cloud looming up behind Conagher, and asked the boatmen, who

were all of the younger generation and could speak English very well, what it meant. "Just a shower," they answered. By the time we had rowed halfway back along the Doon it had become so dark that we could hardly see across the bay. This seemed to increase the voracity of the fish, and we hooked one monster after another as fast as we could haul them up. Just as I was in the act of landing one the boat was struck by a blinding deluge of rain. The sea rose directly, and the wind swept the crests of the waves off and twirled them into stinging showers of white spray. Our crew, consisting of four strong young fellows, pulled away at the oars vigorously, but made no progress so far as I could note by such jutting crags as were visible through the mirk of the storm. By-and-by they made the boat creep along, and in a while we came to a cave in which the St. Kildans hoped to find shelter from the wind and waves. Instead, however, of proving a haven of safety, it turned out to be a veritable death-trap. The huge waves lifted our wee craft and flung it forward with such force that it looked perilously like being jammed into the crevice in which the little cave ended.

Our boatmen had hitherto been speaking in English, but the exciting character of the situation soon sent them back upon their Gaelic, in which tongue they yelled at each other furiously. One of them lost his head so far that, instead of keeping his oar against the side of the cave in order to push the boat off, drew it in and held it straight up, mast fashion, and in we went on the next roller. I made sure that her bows would jam under an overhanging crag and that the succeeding wave would fill her, a disaster which would undoubtedly have befallen us had not my brother jumped up



KITTIWAKES NESTING ON DOON

and held her out by placing both hands against the rock. He told me afterwards that the effort was so great that it appeared to strain every muscle in his body. Some idea of the danger of our situation may be gathered when I state that more than once, as a wave broke against the overhanging side of the cave on our starboard, it splashed into the boat, and during the back suck of the swell we trailed and bumped on the sloping rock on our port.

The whole scene was one of indescribable grandeur from an elemental point of view. Outside, the sea and the descending torrents of rain were mixing in a wild tumult of spray and foam. The waves were leaping against the black basaltic crags, and making fearsome thunder in the great caves that tunnel the Doon in places right through from Village Bay to the Atlantic.

Perhaps the strangest thing of all in this scene of gloom and uproar was that afforded by twenty or thirty gentle little Kittiwakes, sitting on their nests in the utmost peace and security only a few feet over our imperilled heads.

In from twenty minutes to half an hour the storm blew itself out, and I think we all breathed a sigh of relief when we regained the open water in safety. As a matter of fact, to seek refuge in such a place was the maddest thing we could have done.

Without any desire to propound a psychological problem, or in any way boast of my nerve, I will here mention a fact which I must confess I cannot quite understand. While sitting in the boat during the episode I have just recorded I did not realise my danger half so acutely as I did when thinking the matter over quietly in my hammock the same night. I recollect a similar thing occurring before

to me, when a lunatic with whom I happened to be travelling in a midnight express from London to the North, suddenly whipped out a revolver and, clapping the cold muzzle to my temples, threatened, without the slightest provocation, to blow my brains out. In both cases I am persuaded that my mind was too busy with the facts to allow the prime agent of fear—the imagination—to operate.

We tried the fish again, but somehow or other our indiarubber sand-eels had lost their charm, and now we toiled for nought. Our catch before the storm, however, was by no means a small one; as upon landing we counted twenty splendid Coalfish, averaging about ten pounds apiece, as they were flung from the boat on to the rocks.

I secured one for myself, as I wanted its entrails to use as a lure for Ravens and Hooded-Crows. I put the fish carefully away inside the cleit which stood in front of our cottage, and walled up the entrance in order to prevent the ever-prowling, fish-loving dogs from getting at it. I believe that the dogs of St. Kilda know from the sound of the breakers when the tide is ebbing, for two or three of them were always to be seen slinking backwards and forwards along the narrow strip of sand visible at the head of Village Bay during low water. I do not remember being down at this spot once without seeing them or their footprints.

The next day being Sunday, and the longest in the year of Grace eighteen hundred and ninety-six, I waited until it had passed and my friends had all tucked themselves away in their hammocks, when I put on my great-coat, and seizing a couple of military blankets and a double-barrelled gun, quietly stole out of the house with the intention of passing the rest of the night in the cleit in front of it, for

purposes of observation, and if possible the securing of some predatory birds of which the natives were desirous I should rid them.

I dragged the fish forth, and extracting its digestive organs placed them on the top of another cleit, within gunshot of the one in which I was about to locate myself. This done, I retired and walled up the doorway to within an inch or two of the top; and carefully spreading a few handfuls of old hay on the stones to prevent the gun-barrels from making a noise or getting scratched, loaded, rolled myself up in my wraps, and began an enthusiastically expectant wait. It was never really too dark to read bold print, but the birds did not begin to stir until about three o'clock, when a Wheatear saluted the coming day with his familiar note. The Kittiwakes down in the bay next began to stretch themselves and say good morning to each other. When day had fairly dawned I heard the hoarse croak of a Raven, and raising myself on one knee cocked my gun and waited in that glorious state of excitement peculiar to men who have tarried long and patiently for a first shot at some cunning bird or beast, against whose highly-developed instincts of self-preservation they have pitted their wits and skill. But the music of that particular Raven became fainter and fainter as he swung round the shoulder of Conagher, and my teeth chattered louder and louder as I knelt and shivered in the icy-cold wind that swept through the open walls of the structure within which I had concealed myself.

Creeping cautiously to the opposite end of the cleit I saw through a hole, which commanded a good view of the village, a Great Black-backed Gull standing sedately on a house-top, whilst a

number of Herring-Gulls were searching the refuse heap in front of it for some garbage upon which they might make a breakfast.

Presently I saw a pair of Ravens come round the breast of steep Mullách Oshival. They were flying at a very leisurely pace, and appeared to be coming straight towards me. I waited with bated breath, thinking they would discover the feast I had provided for them; but alas! they only croaked solemnly to each other, and passed on to the other end of the village.

Half an hour later I heard a Grey Crow speak out close at hand. A fleeting shadow passed the chinks in the wall, and he plumped down with considerable clatter on the roof of the cleit immediately over my head. I kept perfectly still, and in a few seconds he made out the position of the carrion and winged his way straight to it. Just as he alighted my eye ran along the gun-barrel, there was a reverberating bang, and one Hooded-Crow less to trouble the natives of Hirta by stealing the eggs and young of their precious birds.

The report of my fowling-piece set every dog in the village barking madly, and sent a crowd of Lesser Black-backs and Herring-Gulls away from their morning meal at the midden heaps to protest loudly against me for the fright I had given them, as they circled higher and higher in the air over my head.

After I had picked up my trophy and prepared him for the skinning-knife, I re-entered my place of hiding; but to small purpose, as the old maid's cats living next door to us scented my offal, and by their assiduous attentions made it impossible for me to get another shot.

The greatest sight of all, from an ornithological

point of view, at St. Kilda is the prodigious flock of Puffins on Soa. We determined to go thither the first time a favourable spell of weather gave us an opportunity. The morning of June 22nd was deemed suitable by all the weather-wise old men; and after a wearisomely protracted debate upon various matters affecting the Commonwealth, we started.

When we reached that part of the coast lying behind the village, we saw a lot of Shags and other birds upon a promontory of rock that looked approachable with the boat. It was decided to land, and after a deal of manœuvring bows on as usual, we succeeded in getting ashore by the aid of ropes. Once or twice, as I sat in the vessel's prow with a leg dangling over each side ready to leap ashore, I missed my chance, and her keel came bump, bump down the steep rock as she was sucked back upon the receding waters of a wave.

We clambered about amongst a number of huge detached boulders in search of something to photograph, but found nothing of any value until my brother, who had ascended by a tortuous climb from ledge to ledge away to the left of us, discovered a Shag's nest, containing three down-clad young ones, in an open nook some thirty or forty feet immediately above us. In order to examine the birds and assist in the taking of their portraits I began to climb straight up amongst the great loose crags which at one place almost defied my best efforts on account of their wall-like steepness. However, I selected a fairly wide crevice, formed by two immense rocks having fallen into somewhat similar positions, and placing a hand and foot on either side, literally worked my way upwards until I came to a large stone which appeared to be firmly wedged in between the two forming the crevice. I managed

YOUNG SHAGS.

to negotiate it successfully, and presently joined my brother and the young Shags, which were trembling and shaking in a most distressing state of fear. After a great deal of trouble, and the enduring of a vastly unpleasant smell arising from the filthy condition of the nest and rocks round about, which were plastered with excreta, we succeeded in making what we hoped would turn out to be a fairly decent picture. I do not know whether it has ever been noticed or recorded before, but according to my experience the nests of Shags are far less frequently surrounded by fish in all stages of decay than are those of Cormorants.

As soon as we had done with the long-necked, shivering creatures, each of us prepared to descend by his own chosen path. My brother got down first, and just as he was travelling along a ledge directly beneath the lump of rock I have just mentioned as being jammed betwixt the two upright crags, we had the narrowest escape from a terrible accident I have ever witnessed. No sooner had I placed my right foot on the stone, which I had every reason to believe was as firmly locked in its position as the keystone of an arch, than it twirled over and slipped out, and I suffered the extreme horror of seeing it descend straight upon my brother. By a stroke of wonderful good luck he saw it start, and making a dexterous bound just managed to clear its path by a hairsbreadth. It struck the ledge of rock with a dull crash, pulverised a portion of itself into a sulphureous smelling little cloud of powder, and thundering onwards down the steep slope of the cliff, finally bounded into the sea with a churning splash. I should undoubtedly have followed it had I not had my hands hard pressed against the boulder on either

side. The danger I had unconsciously undergone in ascending the crevice was not pleasant to reflect upon, and the incident made me feel distinctly uncomfortable for a while.

We saw a great number of Razorbills' eggs lying about under boulders and ledges, and here and there came across a newly-hatched young one,

YOUNG RAZORBILL.

which was making its worldly wants known by vigorous chirping. The one figuring in our illustration was photographed at this place; and its comical, over-sized looking feet will, no doubt, suggest to anyone unacquainted with the peculiar development of the lower extremities of the young of this species a freak of the camera, not uncommon, I believe, when dealing with feet.

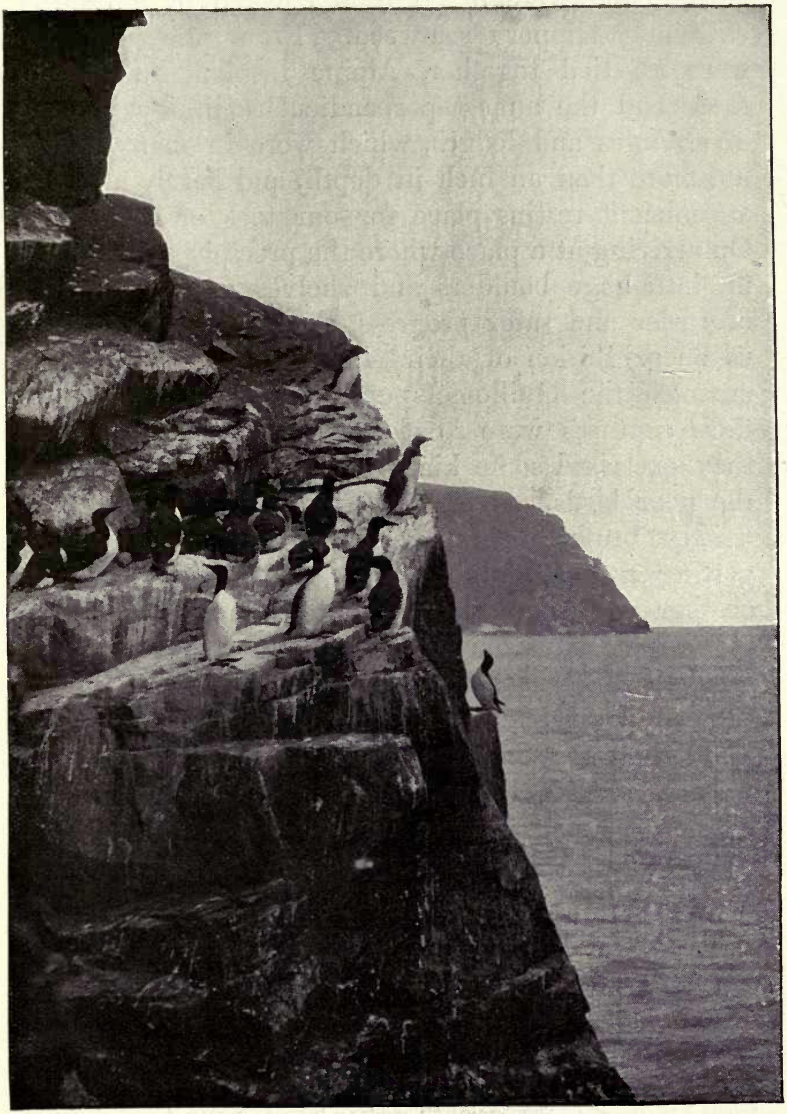
By working his way carefully along a narrow ledge which jutted out over the sea some two

hundred feet below, my brother was enabled to stalk a number of Guillemots and Razorbills, and make the picture opposite.

At this place I noticed several Guillemots' eggs just showing from pools of rain-water, formed by the peculiar upward slope of the outer edge of the rock beds. In two or three cases a warm egg was lying on a dry flat ledge an inch or two above the immersed one, and so similar were the two in ground colour and markings that I was at once reminded of the assertion of cragsmen in various parts of the country that although this species lays eggs varying very widely in coloration, an individual Guillemot invariably produces a similar type of egg from year to year. I do not think that there could be any doubt but that the eggs in the water had originally been laid on the ledge where the warm eggs were resting, and that they had accidentally rolled away and been lost to their owners for hatching purposes. The St. Kildans whom I consulted upon the matter were of the same opinion, and corroborated the statements of other cragsmen in regard to an individual bird always laying a similar type of egg.

After the usual difficulties of re-embarkation had been successfully surmounted we steered for Soa, which we found to be the most awkward island to effect a landing upon which we had yet encountered. Martin in writing of it says:—"It is dangerous to ascend; the landing is also very hazardous both in regard of the raging sea on the rock that must be climbed." He contented himself by watching both done, a fact which, I am inclined to think, only lessened his appreciation of the difficulties.

We got ashore, after a great deal of scrambling and excitement, at a place where the rocks sloped



GUILLEMOTS ON CLIFF.

at a much more acute angle than the roof of most houses, and were in addition covered by a crop of extremely slippery sea-weed. From this point we were all tied together, Alpine fashion, and began to ascend the almost perpendicular cliff by the aid of crannies and ledges, which were in many places not more than an inch in depth, and barely afforded a sufficient resting-place for our toes or finger-tips. On arriving at a place where the precipice was broken up into huge boulders and shelves which admitted of easier and safer progress, the men began to give us an exhibition of their skill with the fowling-rod amongst the Guillemots and Razorbills. Some of their captures were so clever that it appeared as if they exercised some kind of destructive charm over the poor birds.

My brother commenced to busy himself after getting a photograph of a Fulmar Petrel sitting on her egg, and selecting a bird in a particularly picturesque situation commenced to stalk her very carefully. At last he came to a place where, by dint of perseverance and the exercise of considerable ingenuity, he was enabled to fix the legs of his camera into the interstices of the rocks in such a position as to enable him to focus the bird at close range. She was very uneasy at first, but by working very deftly he allayed her fears, and she sat an absolute picture against the bold mass of overhanging broken crags. My brother was in a perfect ecstasy of delight when putting in his slide, but, alas! just as he was in the very act of exposing the plate, a dog, belonging to one of the men, popped its great ugly head round a corner close to the Fulmar, and she instantly sprang into the air and was gone. That cur had good reason to thank its lucky stars that it got off the Isle of

Soa again alive. If the forcible English with which its intrusion was greeted in stentorian tones could have been translated into Gaelic for its edification I am persuaded it would have entertained but an ill-opinion of itself.

When we reached a point some five or six hundred feet up, our boat, which we could see tossing on the waves below, looked like a little chip. Nothing was visible of her except her gunwale and seats, upon which were three small figures—our friend Mr. Young, and a man and a boy who had been left in charge.

I got Finlay Gillies to lay a Puffin snare on a rock which jutted out seawards, and was considered the favourite spot on all the St. Kilda group of islands for the sport. Before he laid the engine of destruction down, the crag had been covered with birds; but the sight of the bit of rope, weighted at either end with a stone and crowded with horse-hair nooses in the middle, made them fight shy of it for a while as they flew past in perfect clouds.

By-and-by one individual, bolder than the rest, alighted on the rock, and with an air of foolish curiosity commenced to step along sideways towards where the snare was set. He pulled several of the nooses about with his beak, and after examining them for awhile grew bolder. Poor bird! his inquisitiveness cost him something; for in the course of his investigations one of his feet slipped through a noose, and when he came to lift his leg he discovered that he was a prisoner. He contested his captivity with great spirit and vigour, to the fright of all the other members of his species that kept on flying close past in a continuous and exhaustless stream, until he became either weary of the struggle or convinced of its uselessness, and rolled over upon

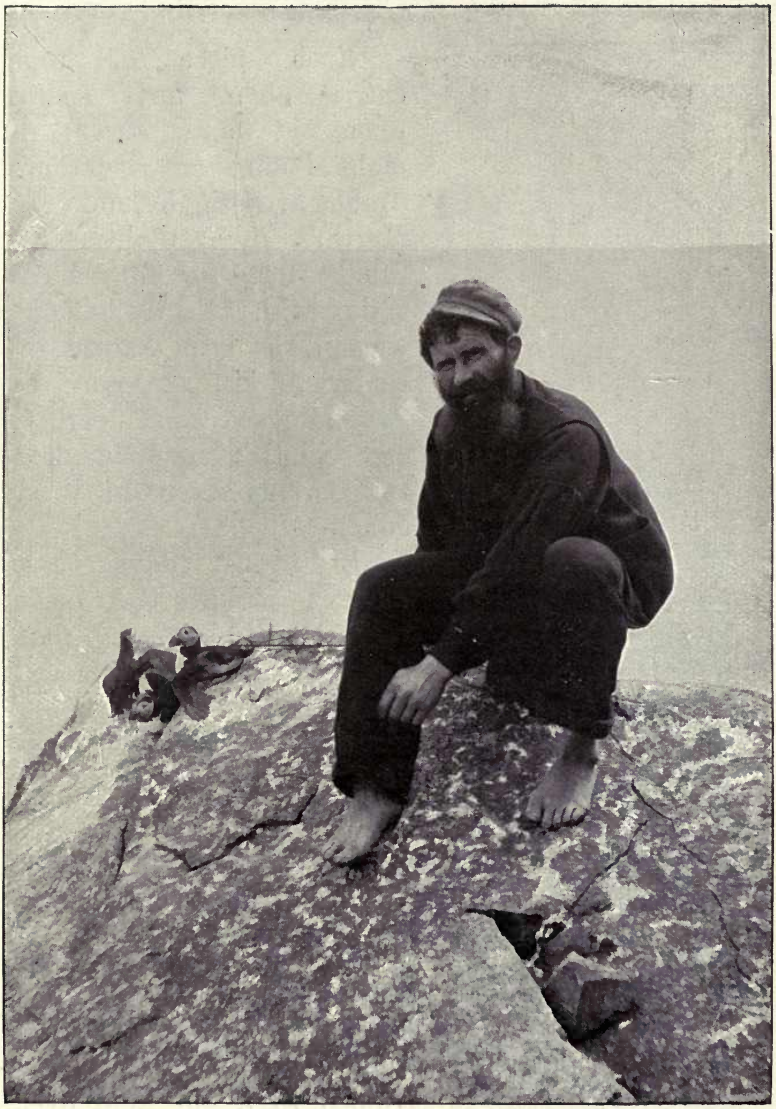
his side. Whilst the captive remained quite still several birds alighted beside him, but directly he stirred they all promptly decamped. They were soon back again, however, and fell to poking about and examining the snare, at which pastime they were solemnly engaged until their relative in bondage had regained his breath and began to beat his wings violently. At this they started up to fly away, but one of them suddenly discovered that he was unable to do so. He had become inextricably entangled, and without the slightest ado set about his fellow-prisoner, evidently thinking that he was the author of all the mischief.

After they had fought and argued, argued and fought, alternately, over the matter for several minutes, they effected a temporary reconciliation and lay on their sides quite still. Presently the other Puffins came back, and alighting, looked on in gaping wonderment, everyone, however, taking flight in the most precipitate manner directly either of the entangled birds stirred.

In a little while two more Tammy Nories became fast, and fought with their companions in misfortune precisely as these had done with each other.

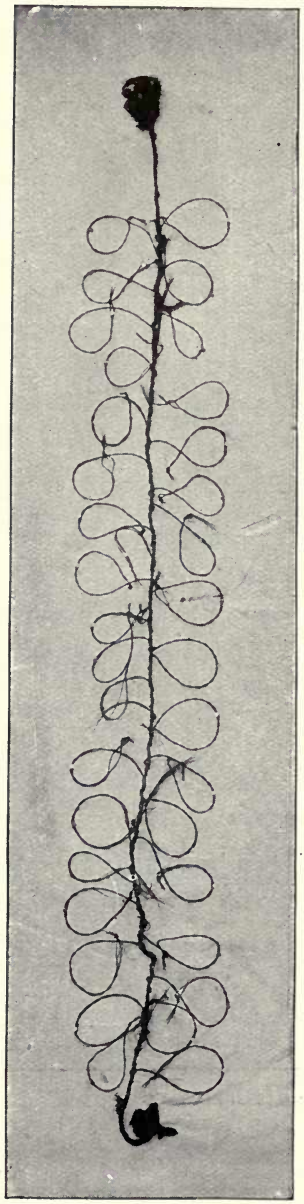
Finlay Gillies stepped along the crag, and sitting down upon one of the stones securing the snare—with as much, and probably far more, composure than he would have shown in a studio—had his portrait taken, along with that of the birds he had secured, in a position from which the slightest slip would have meant a headlong plunge of five hundred feet into the ocean below. Some idea may be gathered of the nature of the place when it is stated that the photographer had to be held securely by a rope whilst making the study.

Two of the Puffins were secured by both legs,



FINLAY GILLIES CATCHING PUFFINS.

one by a leg and its neck, and another by one leg only.



PUFFIN GIN.

Each piece of rope carries about forty snares upon it, and seven or eight Puffins are sometimes caught at a single haul. In Martin's time the natives caught forty or fifty birds a day with a snare, but one woman has been known recently to kill as many as two hundred and eighty, and another one hundred and twenty-seven in three hours.

In former days these snares must have been made very much stronger than they are now and fastened down with extraordinary security, if we are to believe a story recorded by our old friend Martin, on the authority of the folks who lived at the time he visited St. Kilda. A fowler whilst setting one of these snares accidentally got one of his toes entangled in a noose, and being thereby tripped to a fall went over the edge of a precipice, and spent the following night hanging upside down with nothing but one hundred

and twenty feet of thin air betwixt himself and the sea below. The snare, it is pleasant to relate, proved equal to the strain; and such was the endurance of the fowler that he was recovered alive, and lived for many a day to tell the tale of his remarkable adventure.

Some idea may be gathered of the plenitude of Puffin life at St. Kilda when it is stated, on the authority of Mr. Sands, who lived there for about nine months, that in one year alone close upon ninety thousand birds of this species were killed by the natives. They are plucked, split open like kippers, cured, and hung up to dry on strings stretched across the cottages; and whenever a native feels hungry he simply pulls one down from the line, flings it on the fire to grill, and forthwith has his lunch without the aid of knife, fork, plate, or napkin.

Soa excelled everything we had ever seen in the whole of our wanderings in the prodigality of its bird-life. Puffins simply swarmed in the air above it, on the rocks and earth of which it is composed, and dotted the sea all round as far as the powers of a pair of good field-glasses could make them out. Those on the wing twirled round and round in a great cloud that perceptibly interfered with the light of day as it passed over us. The swish of their wings made a continuous buzz, and a stone thrown across the path of their flight could not have failed to bring down one or more victims. The whole scene simply beggared description, and the parasites that fell off the birds as they flew over us swarmed on our caps and jackets, a few of them finding more succulent quarters, much to our discomfort and annoyance.

Whilst I was watching the Puffin gin in operation our friend Mackenzie discovered a brood of

young Wrens hopping in and out amongst the great boulders of rock, and we all gave chase with the idea of capturing one of them in order that my brother might photograph it. We were no match, however, for the sharp little fellows, who dodged about through holes and crevices with tantalising ease and swiftness. Whilst making a desperate rush after one, cap in hand, and all too unheedful of the obstacles lying in my path, I struck the toes of my bootless left foot against a thin slab of earth-fast stone, which stood edge-on and straight up. My second toe gave a tremendous crack, which was heard by one of the boys several yards away, and I felt a stinging pain that turned me quite sick, and compelled me to sit down to sweat and bite my lips in sheer agony. Luckily it was a toe on my already and long since injured leg that was hurt, and after the sickness had passed off a little I resumed the chase on one foot and two hands, and in a short while actually succeeded in capturing a Wren. It happened in this way. I saw the bird go into what proved to be a small cave, and when I peeped inside discovered it sitting at the bottom of an inclined plane of black wet peat three or four yards in. I began to squeeze my way through the mouth of the cave, but being somewhat ample about the shoulders I had considerable difficulty in passing in. No sooner had I got the most ponderous part of my anatomy through than my hands slipped on the slimy peat, and I slid helplessly to the bottom of the cave. Nevertheless, I kept my eye on the Wren, and had the good fortune to secure it in a dark nook, from which there was no escape for the little creature. The difficulty was now to get out of the dank, peculiar-smelling place; for every time I placed a

knee on the peat I slipped back as if I had been attempting to climb a steep hillside composed of soft-surfaced butter. I was so afraid of injuring my wee captive, which I held in my right hand, that I only used my elbow to assist me in climbing up the bank. After two or three attempts I managed to crawl high enough to hand the Wren to my brother. On finally emerging I was smothered with peat. Every button on my waistcoat had scraped up its quantum, and the links of my watch-chain were filled with the evil-smelling stuff.

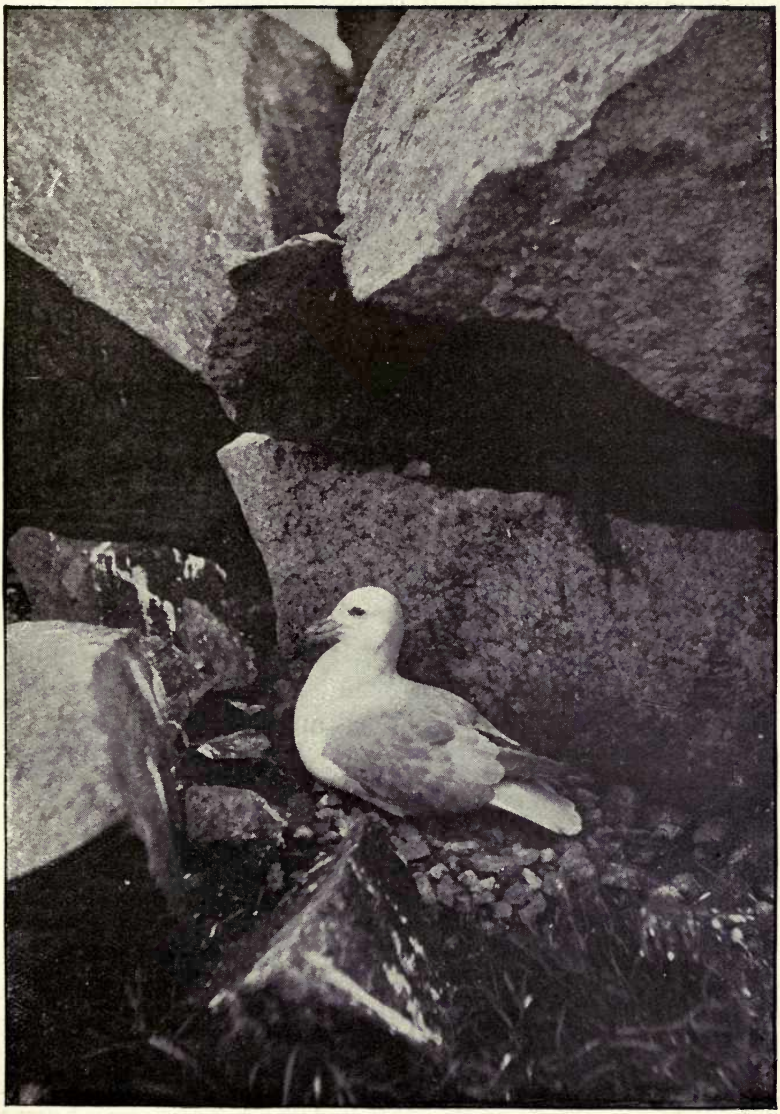
A hundred feet or so below the place where we captured the young Wren we could see several Fulmar Petrels sitting on their eggs, and my brother determined to go down after a picture. By following a ledge for some distance, and then carefully working his way down crevices, with his face to the cliff and his camera held by a strap which he gripped firmly betwixt his teeth—much in the same way a Fox is said to carry a heavy Goose to his lair—he got near to one bird. During the time occupied by his descent I was lying on a spur of rock at full length intently watching through my binoculars the bird he was making for. When he got pretty close up to her, I saw the Fulmar squirt a quantity of amber-coloured oil at him. It travelled three or four feet, describing a kind of half-circle and falling short of the mark.

As the photographer got nearer and commenced to fix up his apparatus amongst some huge boulders, I noticed the bird moving her head and neck rapidly up and down as if trying to remove some obstacle from her throat. In less than two minutes she again ejected a quantity of oil, and as my brother had actually crept within a yard of her, with much greater precision and effect. Some of the oil landed

on the jacket-sleeve of his right arm. He took one or two photographs of this individual bird at very close range, but, unfortunately, they turned out to be failures on account of her having stirred slightly whilst the plate was exposed.

I believe that Fulmar Petrels are popularly supposed to squirt oil at their enemies from their tubular nostrils, but this is certainly not the rule. We saw it ejected from the throat somewhat in the form of a vigorous expectoration, and according to our observation it is not propelled to nearly the distance stated in some ornithological works. It is surprising to find that one authority, who visited the rocks and studied the species, says he never saw the bird squirt oil at its enemies. We saw this done several times at dogs when they approached the more accessible nooks and ledges on which birds were brooding. Again the same observer records that "the Fulmar breeds on the face of the highest precipices, and only on such as are furnished with small grassy shelves." We repeatedly found eggs on shelves and in corners where there was not a single blade of grass alive or dead; the nest, if such it could by any stretch of courtesy be called, simply consisting of a slight hollow lined with pebbles and rock chippings, and in some cases of a shallow declivity in the bare peat without a lining of any kind whatsoever. It may be, of course, that the bird has changed its breeding habits as well as its breeding quarters; for I think there is every reason for believing that it formerly nested in the Hebrides,

MARTIN'S FULMAR.



FULMAR PETREL ON NEST.

as an old chronicler records that "A gentleman of the name of Campbell being fowling among the rocks of Mull, and having mounted a ladder to take some birds out of their holes, was so surprised by one of them squirting a quantity of oil in his face that he quitted his hold and fell down and perished." Although the name of the bird is not mentioned specifically, I think that the use of the ladder almost proves that it was a Fulmar's nest which the unfortunate fowler was raiding.

Within the nineteenth century the bird has established itself as a breeding species in the Faroes to the detriment of the Gannet, and only as far back as 1878 it founded a breeding colony in the Shetlands. Seton quotes two opinions of the bird, which placed side by side appear to be ridiculously contradictory. The St. Kildan proudly says of it, "Can the world exhibit a more valuable commodity? The Fulmar furnishes oil for the lamp, down for the bed, the most salubrious food, and the most efficacious ointment for healing wounds. Deprive us of the Fulmar, and St. Kilda is no more." And the Faroese: "Nasty, stinking beast! Why, even his egg keeps its stench for years; his flesh no man can eat; and if you sleep on a bed in which even a handful of feathers have been put by mistake, you will leave it long before morning."

Kenneth Macaulay, who visited the island more than a century and a quarter ago, says, in writing of the Fulmar, that "to plunder his nest, or to offer indignity to it, is a high crime and misdemeanour." The sacred regard for the bird implied in this quotation does not seem to have been maintained, for it is now remorselessly snared upon its nest during the breeding season on all the islands except St. Kilda and the Doon.

The facsimile on page 116 of an engraving of the bird in Martin's book, when compared with our photograph, illustrates the progress of human effort towards truth and accuracy during the last two hundred years.

One authority states that "each Fulmar contains about half a pint of oil," but my observations and dissections did not corroborate this estimate. The oil gives off such a strong odour that everything in St. Kilda smells of it. I fetched two fowling-rods away with me as curiosities, but when I got them home discovered that they could not be tolerated anywhere in the house. They were, therefore, relegated to an exposed corner in the garden, and remained there bleaching from June to November, at the end of which time the smell appeared to have quite gone, and I took them indoors. In a few days, however, it returned again with something akin to its former strength.

My friend Mackenzie told me that the feathers plucked from the Fulmars are mixed with those of other birds and sold to the Government for stuffing soldiers' pillows. Before being used they are thoroughly fumigated, but in about three years the smell returns to them so strongly that Tommy Atkins refuses to rest his sleeping head on them until they have been again roasted.

Some notion may be formed of the number of birds breeding on St. Kilda and its satellites from the eggs gathered. Martin says that his party, consisting of seventy souls all told, consumed sixteen thousand eggs in three weeks, and that the natives, who were at that time nearly triple their number, ate many more, man for man. He saw twenty-nine baskets of eggs brought down from the rocks in one morning, each of which held from four to eight hundred.

In considering these enormous figures it must not be forgotten that in nearly every case the birds producing them only lay one egg each—as, for instance, the Gannet, Fulmar Petrel, Forked-Tailed Petrel, Stormy Petrel, Manx Shearwater, Guillemot, Razorbill, and Puffin.

The wind began to freshen from the West, and as we had done all the work possible on Soa we commenced to descend. I found this to be an exceedingly difficult and dangerous matter on account of my inability to use the left foot, as the pain in my injured toe was excruciating every time I attempted to put it to the ground.

When we looked down upon the sea there was some reason for anxiety. It had risen to such an alarming extent that it was doubtful whether we should be able to re-embark. Our boat was jigging about on the waves in a truly remarkable fashion.

The prospect of a compulsory stay on the isle of Soa without anything to eat except raw eggs and sea-birds for days—or maybe weeks—together, was not pleasant to contemplate. However, a few days of the discomforts of St. Kilda prepare the traveller for a deal, especially if he has any heart for adventure and a taste for the rough side of things.

In due season we arrived within earshot of the boat, and some piece of intelligence shouted from it in the Gaelic tongue seemed to electrify the men who were with us, and there began the most heated debate we had as yet been compelled to listen to. It was all yelled back and forth above the boom of the breakers, and appeared to be a quarrel which could not possibly end short of the spilling of somebody's blood. I instinctively turned to my friend Mackenzie, to see if I could read aught of the consequence of the matter in his face, but it was

imperturbably placid, and I felt reassured. By-and-by everybody simmered down to a condition of sweet reasonableness, and we began the dangerous and exciting business of re-embarkation. The great difficulty was to get the boat near enough for us to make a flying leap aboard, and yet preserve her from having her timbers stove in upon the rocks, against which the waves were leaping to tremendous heights. A big one broke over the corner of a rock which afforded the craft some shelter, and drenched its occupants, together with some of our apparatus, which I fear will for ever bear witness to the rudeness of the seas running round Soa.

When it came to my turn to enter her, I cautiously advanced to a point at which there appeared to be safe foothold in a crevice full of salt-water and winkle-shells. Here I waited for an opportunity, whilst the waves broke round my legs and the boat danced about in front of me in the most dizzying fashion. At last I thought my chance had come, and prepared to leap; but the craft, instead of rising to where I expected, sank like a plummet into the trough of the sea. The man behind me had slacked the safety rope in order to leave me free to bound forward, and in the absence of its steadying strain I slipped, overbalanced myself, and dived head-foremost into the boat five or six feet below. I struck one of the seats with my right shoulder and neck, and saw stars of every magnitude and colour. I made sure my collarbone had gone, but luckily I was mistaken. It was a narrow escape, as I struck the boat's gunwale just below my right hip, and might have dropped between her and the rock, in which case I should have been crushed to death almost to a certainty. It was a week or two before I lost the black and

blue mementoes of Soa from various parts of my body. I now learned from Mr. Young the origin of the heated debate which I had feared would end in sanguinary warfare. The Commonwealth had suffered a loss. In our absence the boat had tumbled about to such an extent that the boy had become sea-sick; the poor fellow had been violently pitched from one side of the craft to the other, and falling on one of the great clumsy oars had broken its ample timbers right in two.

We now pulled away through the Straits dividing Soa from St. Kilda, and I shall never forget the magnificent sight of the waves at this point. They rolled in from the open Atlantic like great green monsters, each more anxious than the rest to engulf us and our frail barque. There was considerable doubt whether we should ever fetch Village Bay that night with only three oars, and the men proposed to land us at the bottom of the Glen in order that we might walk home; but I don't think anybody cared to try that course when they saw the great white sea-horses leaping upon the rocks in that quarter, so we rowed slowly past.

When just beneath the towering face of Conagher I observed a Guillemot of peculiar plumage in the sea; and as Mr. Young thought it would be an interesting acquisition to a provincial museum in which he was interested, we consulted the natives upon the subject of frightening the birds, and, after gaining their unanimous consent, the factor raised his gun and fired. The shot brought about one of the grandest scenes of bird-life I have ever seen or expect to see again. The air was instantly filled with a vast multitude of birds, the noise of whose countless wings was like the low rumbling sound of distant thunder. From the topmost ledges

of Conagher to the caves at its base, more than a thousand feet below, there poured seawards a great throng of Fulmar Petrels, Guillemots, Razorbills, Puffins, and Shags. As far as the eye could reach in that direction the cloud of feathered creatures seemed to extend and confuse the sense of sight by their evolutions.

In an hour or two we landed in Village Bay, stiff, tired, cold, wet, sore, and hungry.

It is interesting to note that the St. Kildans, in landing from their boat on Soa or Borrera, practise exactly the same methods to-day that their forefathers did two centuries ago.

In writing of the former island, Martin mentions an amusing incident which happened there two years prior to his visit:—"There was a cock-boat came from a ship for water, being favoured by a perfect calm; the men discerned a prodigious number of eggs upon the rocks which tempted them to venture near the place, and at last obtained a competent number of them; one of the seamen was industrious enough to put them into his breeches, which he took off for the purpose. Some of the inhabitants of St. Kilda who happened to be in the isle that day were spectators of the diversion, and were offended at it being done without their consent; they therefore devised an expedient which at once robbed the seamen of their eggs and the breeches. 'Twas thus: they found a few loose stones in the superficies of the rock, some of which they let fall down perpendicularly above the seamen, the terror of which obliged them quickly to remove, abandoning both breeches and eggs for their safety; and the tarpaulin breeches were no small ornament in a place where all wore girded plaids."

Of the skill and daring of the St. Kildans as

cragsmen some opinion may be formed when it is stated that they climb the tallest of the rock-stacks (Biorrach) shown in the accompanying picture, which has been reproduced from a photograph taken whilst we were on Soa. It is from four to five hundred feet in height, and has to be ascended without the aid of a rope. Biorrach is the most difficult rock-stack to scale in the whole of the St. Kilda group, and was in former times one of the tests of a man's nerve when he offered himself as a candidate for the coveted fold of matrimonial bliss.

A few years ago a couple of fowlers climbed it for the small reward of a quid of tobacco.

Accidents do not often happen nowadays; but to judge from Sir Robert Moray they must have been of somewhat frequent occurrence in former times, for he says that a St. Kildan was rarely known to die in his bed, being either drowned or having his neck broken by a fall over the cliffs.

The decrease in the death-rate from accidents is no doubt due to the exercise of greater care whilst climbing. My brother went out one afternoon along with one of the young men in order to photograph a Fulmar's nest and egg, and descended such an awkward cliff that the St. Kildan never expected to see him come up alive again, and said that if the men had been there they would not have allowed him to go down such a place without a rope.

The fowling-ropes now in use are made of Manilla hemp, but formerly they were of horse-hair, which in Martin's time was protected by a coat of cowhide. I was fortunate enough to secure the last old rope on the island for half-a-crown, and upon inquiry discovered that the hair of which it was composed had cost five shillings per pound, and that the last man in

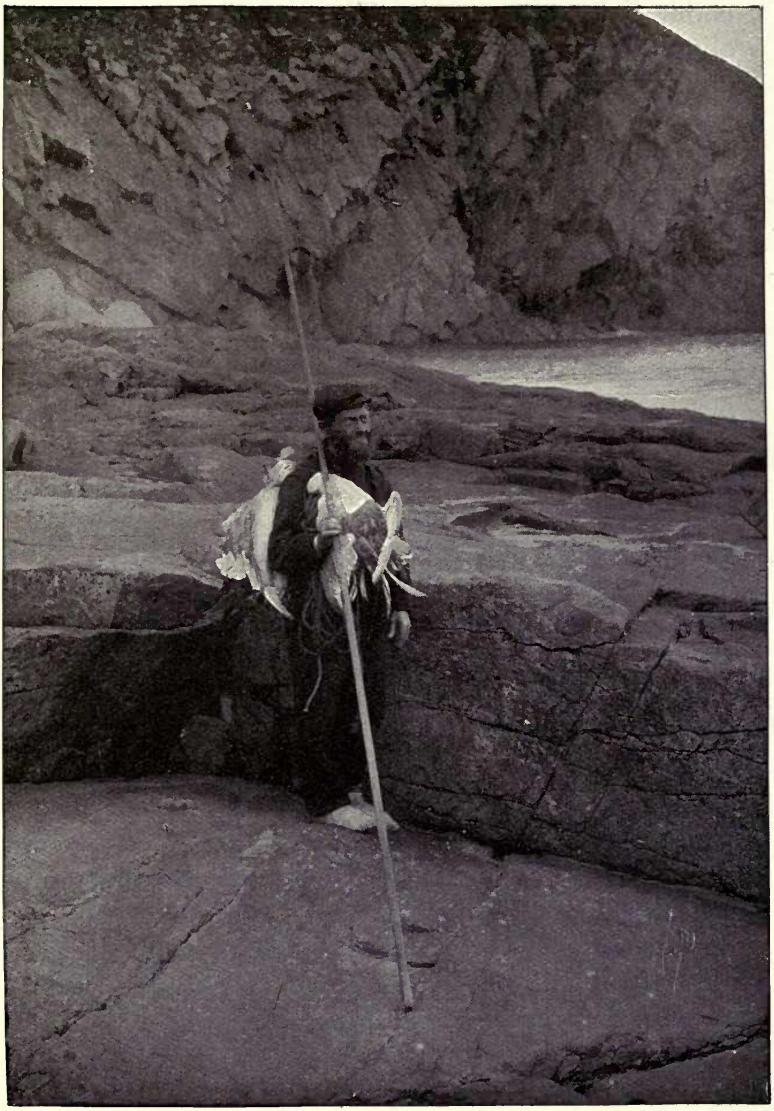
STACK BIORRACH

St. Kilda who knew how to make one was long since dead. My purchase weighs three pounds, and measures fifty-two feet in length, and is, I need hardly say, treasured as a prize of considerable value amongst my collection of curiosities.

HORSEHAIR ROPE.

Kenneth Macaulay describes the fowling-rope in use at the time of his visit as thirty fathoms long, "made of a strong, raw cow-hide . . . capable of sustaining a great weight, and lasting for about two generations." He adds that "in the testament of a father it constitutes the very first article in favour of his eldest son; should it happen to fall to a daughter's share in default of male heirs it is reckoned equal in value to the two best cows in the isle."

Four years ago a girl, whilst watching the men collect eggs on the Doon, had her petticoats ballooned by a sudden squall of wind, and was lifted clean over the cliff. She fell one hundred and eighty feet without a break, and alighted on a ledge which was covered with earth. The cragsmen descended to pick up what they very naturally



ST. KILDAN FOWLER.

supposed to be the dead body of the poor child, but were surprised to find that she was still alive. Her head had entered a large Puffin burrow, and the force of the blow been expended upon her shoulders. This undoubtedly saved her, and although she hung a whole week between life and death in an unconscious condition, she ultimately made a complete recovery, and was a fine buxom lassie at the time of our visit.

Seton has a note to the effect that the Eider Duck is only seen occasionally at St. Kilda. I cannot understand this, for I saw several pairs nearly every morning in Village Bay, and had a clutch of eggs offered to me for sale.

If a stray Heron happens to alight upon St. Kilda the natives firmly believe that they are being visited by a witch from Stornaway.

It is said the Cuckoo is rarely to be seen in Hirta, and then only upon such extraordinary occasions as the death of MacLeod, his steward, or the arrival of some notable stranger upon the island. This venerable superstition is more than two centuries old, and is still believed in as firmly as ever. In fact, its truth is said to have been verified only a year or two back, when a bird visited the island as a presage of the late proprietor's death.

Bees are never seen at St. Kilda, and I very much doubt whether such insects would find sustenance if they ever found their way thither.

On the evening of the 23rd of June we packed up our things and held a kind of farewell meeting, at which we distributed our spare tea, coffee, cheese, butter, and other articles amongst the people, as we expected the steamer which was to take us away on the morrow to be in the Bay

in ample time for us to breakfast on board. At eight o'clock next morning she had not hove in sight, and when time dragged heavily along till the stroke of ten was upon us we were all hungry, and I must confess I was a wee bit home-sick, as everything looked so cheerless and dismal.

About eleven o'clock the *Hebridean* steamed into sight to our great satisfaction, and we speedily boarded her in search of breakfast.

In due course we shook hands with all the natives, except two or three who were going with us; and a hearty hand-shake it was. We had endeared ourselves to them by frank dealing and readiness to go where they went, endure what they endured, give tobacco and sweets, or accept whey and bannock in the same simple spirit.

This line of conduct is one the value of which I have proved over and over again, and would earnestly impress upon every young field naturalist. It is the royal road to all honest men's hearts, and will help one to much useful knowledge that will forever remain hidden from the man who believes in the cynicism of "every man at his price."

The St. Kildans have sent us their "love" by nearly every fishing-boat which has put into Village Bay since we left.

As we steamed away and left the islands in our wake, I must confess I felt sorry to leave the many genuine friends we had made, the majestic rocks and their teeming myriads of birds, and turned again and again to watch the lonely crags grow smaller and dimmer upon the horizon.

At Benbecula I parted with my brother, who was going to Skye to stay with our enthusiastic natural history friend H. A. Macpherson, and bade adieu to my companions of tinned provisions and string bed-quilts.

When the boat in which I sailed reached Tiree, a thick drizzling mist came down and enveloped everything in sombre gloom. A steamer which had just left the island returned and cast anchor rather than risk the dangers of proceeding in such weather; but our captain thought he could fetch the Isle of Coll, and accordingly we crept out and away. The sea was perfectly smooth, and not a soul on board recked of danger, except one elderly gentleman who had been already twice in the jaws of maritime disaster. This aged Ulysses told me he had suffered the thrilling horror of having his ship crushed to splinters amongst the ice in high latitudes, and spending three days and nights in an open boat before he reached the shores of Greenland, on one occasion; and had been obliged to quit a foundering vessel in the middle of the North Sea on another. These disasters and the hand of Time had to some extent robbed a very fine old man of his nerve; but his expressed fears of an accident were presently justified.

We had steamed our allotted distance without meeting with any signs of Coll, and were proceeding at a very cautious rate when suddenly a huge red buoy loomed in sight just ahead of us. The captain at once put his helm hard down, but, unfortunately, the boat had not sufficient way upon her to answer to it, and we crept steadily on to a sunken rock. There was a bump and two crunches, and the steamer stopped dead, with her bows in the air and a list to starboard. At the moment, I was leaning against a rail studying some horses on the cargo-deck amidships. When the vessel struck, the poor animals stumbled and drummed with their feet on the planks, those with their heads to starboard bumping them against her plates as she heeled over and robbed them of their balance.

All the quoit-playing and fun on board suddenly ceased, and the cry went round "We're on the rocks!" which was true enough, inasmuch as they could be plainly seen from the forecastle deck. The tragic fate of the people who had gone down with the *Drummond Castle* a few days before was still clinging with all its horrors to the minds of most of our passengers, whose fears were heightened when they saw the crew begin to lower the boats.

No sooner had the ship struck than I dived below for my box of St. Kilda negatives, which had been stowed away for safety in the grog cellar beneath the saloon deck, now thickly strewn with broken wine glasses that had been shaken from their place over the dining table.

The order went round that nothing in the shape of luggage could be taken in the boats. I was quite willing to let my clothing and collection of natural history specimens and curiosities go to the bottom, but the St. Kilda negatives I simply couldn't give up. They appealed to me like dumb children, and I, on their behoof, to one of the officers with all the eloquence I could summon; but his heart was as adamant, and he regarded not my pleadings.

The situation was curious and extremely interesting, for it afforded me an opportunity of noting the behaviour of my fellow creatures in the hour of danger. One little man cut a ridiculous figure by rushing about affecting to be very brave and cool, yet trembling like an aspen-leaf in every limb and looking as white as if he had just shaken hands with a ghost, all the while worrying the crew with such questions as—"Has she got water-tight bulkheads?" "Is the water coming into her?" and so on, to each of which he received a courteous "Yes" or "No" as

the answer was judged to be good for his mental comfort, without the slightest regard whatever for the truth.

We had a number of ladies on board, and in justice to them I must say that as a whole they were much cooler than the men. One level-headed, practical little Scotswoman, with a delightful accent and happy phraseology, was conspicuous for her good sense and reassuring coolness. Another, who turned out to be a hospital nurse on her holidays, earned my profound admiration by comforting a poor, half-blind St. Kilda woman on her way to a Glasgow Eye Infirmary to have some ophthalmic disease, from which she was suffering acutely, attended to. The poor creature fell into the most pitiable state of fear when she became aware of our plight, and cried and wailed in a heartrending fashion. I could not bear to look upon her distress as she clung tightly to her comforter and swayed back and forth moaning in anguish all the while.

Two things struck me particularly during the scene of excitement. One was that several men whose physical appearance was suggestive of robust health and strong nerves were the greatest cowards, and the other that nine out of ten of the male passengers could, according to their expressed opinions to each other, have managed the boat far better than the captain himself, who had been born within a mile or two of the rock we were on, and had steered his ship past it in all weathers for twenty years without a mishap.

Luckily for us the sea was smooth and the tide rising. By shifting all the passengers and a quantity of the deck cargo aft, and steaming full-speed astern, after about twenty minutes of suspense we ground our way off the rock into deep water. An

examination was at once made below by the engineer for a leak, but as none could be found we steamed slowly away on our journey.

Nearly everybody stayed on deck during the night, and beguiled the weary hours by telling stories, singing songs, and shivering in the cold, murky drizzle that made the dangerous Sound of Mull exceedingly difficult to navigate.

I went below once, and found the saloon tenanted only by a burly horse-dealer and another man, having the appearance of a whisky traveller, holding high debate with a strapping farmer's daughter from North Uist on certain equine ills. I think I fell asleep during a lull on ring-bone, and woke up in the middle of a storm on spavins. The young woman was more than a match for her adversaries, and when she saw me smile approval at some little advantage she had gained in her war of words, promptly walked over to where I was sitting and rewarded my intelligence with a handful of oat bannock and skimmed-milk cheese which she took from a small hand-bag.

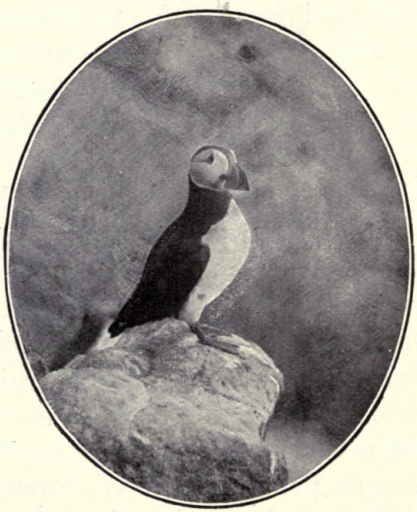
We reached Oban Bay at three o'clock in the morning, and as day dawned fifteen minutes later, I heard a Thrush begin to sing and a Cuckoo to "tell his name to all the hills around."

As it was Saturday, and I was anxious to spend the following day at home before returning to business in London early on the Monday morning, I left the boat, and several other passengers followed my example; amongst them my twice-shipwrecked friend, and the little man who had striven so strenuously and vainly to assume the appearance of courage. As the first train did not start south until six o'clock and all the hotel keepers were locked in slumber, we went into the night porter's room at the railway

station, where there was a good fire, and sat round in sombre meditation.

Our little friend feeling sleepy, stretched himself face downwards on a huge table with his field-glasses for a pillow. He snored magnificently for the space of twenty minutes, and then startled us by jumping up as if he had been shot and yelling out, "We've been on the rocks! we've been on the rocks!"

Not recognising either of his late shipmates, he began to tell us a tale of his adventures and hair-breadth escapes, that went far towards eclipsing the ups and downs of Robinson Crusoe, and made me long madly after the godlike gift of picturesque exaggeration.



PUFFIN

CHAPTER IV.

GAMEKEEPERS: THEIR FRIENDS AND FOES.

DURING our travels in search of materials for camera and notebook we have naturally fallen in with many gamekeepers and learnt a great deal about their friends and enemies, and it is my intention to give in the present chapter some account of what we have heard and seen whilst wandering about on great game preserves in all parts of the country.

Gamekeepers as a class are shrewd, practical fellows, with an intense belief in what they know from experience, and an extreme contempt for anything in the nature of book-learning about the life of the fields, woods, and moors.

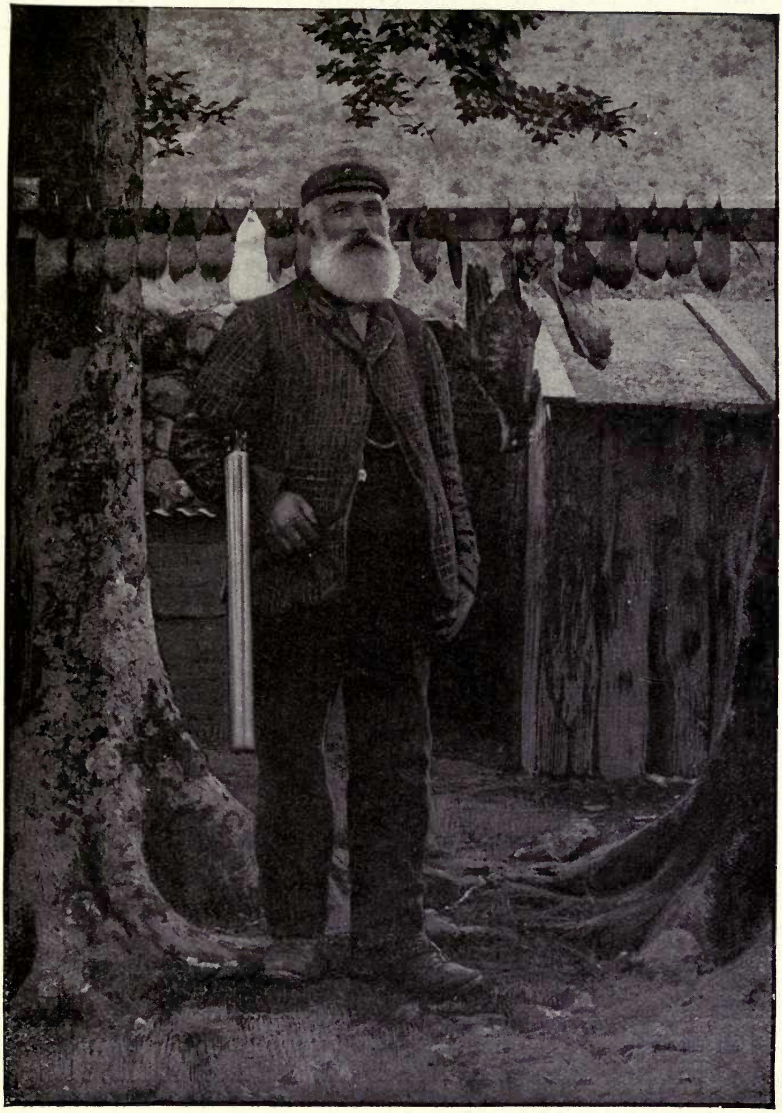
I have surprised many of them, who would listen to my bird stories with good-natured incredulity, by proving a practical knowledge of the ways of vermin and the best methods of stopping their ravages; and one at least attests the value of my advice in regard to destroying common Brown Rats.

He was telling me what trouble these artful depredators gave him, and of their cunning in avoiding his traps. I said, "You should place your steel gins in that water" (pointing to a shallow creek crossed by a rat-track running along the side of a small lake) "if you want to catch them."

He adopted the advice, and with so much success that he afterwards told a friend of mine, who happened to cross his path, that whether I knew anything about birds or not I had certainly taught him one of the best ways of catching rats that he "had ever tried or heard tell of."

At one place in the Hebrides, where we stayed for a few days, we became on very good terms with a gamekeeper who was much troubled by several pairs of Peregrine Falcons that were, with the help of Golden Eagles and other birds of prey, committing sad havoc amongst the Grouse breeding on his beat.

We accompanied him one day on a long journey, which he undertook in order to try to shoot a female Peregrine as she flew from her eyrie, situated in a horizontal fissure running for a yard or two along the face of a gigantic precipice. We climbed to the foot of the cliff, and when the keeper had sufficiently regained his breath to enable him to take aim with tolerable certainty I made a noise to disturb the sitting bird, but in vain, she would not stir a feather. Thereupon our friend drew one of his "wire" cartridges, and putting in a smokeless ordinary, straightway fired. The Falcon instantly darted out, and before the reverberations of his first shot had commenced to kiss the rocks across the loch at our feet the keeper had dispatched his second message of lead heavenwards in pursuit of the fleeing bird. But the distance was too great to permit of any damage being done, and after flying round and round high overhead for a little while uttering her wailing alarm note "*Kek*, *kek*, *kek*, *kek*," the Peregrine came down, boldly alighted on a jutting crag, and watched us calmly from her coign of vantage some three hundred feet above.



HIGHLAND GAMEKEEPER AND SOME OF HIS TROPHIES.

The cliff could not have been less than four hundred feet in height, and as the eyrie was situated midway betwixt its base and summit the bird was practically out of gunshot, whether approached from the top or bottom.

After we left, the gamekeeper thinking that by the exercise of a little patience he could destroy the eggs, kept the parent birds off the nest for six consecutive hours, but to no purpose, for the faithful Peregrines ultimately brought off their young ones in safety.

A strange peculiarity of many birds of prey is their unconquerable love for an old breeding haunt. If the female is killed the male flies away, and often returns in an incredibly short space of time with another mate.

Amongst other interesting things which our friend told us about Peregrine Falcons was an instance of two male birds living in perfect harmony with one female. It came about in this way. He had shot a female from her eyrie in a cleft of rock, and placing a trap for the male, discovered a day or two afterwards that he had been in it and taken his departure minus a leg. In a little while this legless bird returned with a male and female, and they all three occupied the old nesting-quarters in the utmost peace.

The same gamekeeper also told us that he had seen one of these birds strike the head clean off a Grouse whilst in full flight by one blow of its powerful wing.

In the spring of 1896 my brother returned to this part of Scotland in the hope of getting a photograph of a Golden Eagle sitting on her eggs, but found it impossible to do so on account of the bird's exceeding shyness, and the fact that he could

ADDER BASKING.

not command a view of the eyrie from any point at which he could use his telephoto lens.

One day, whilst out with an old game-watcher, he espied an Adder basking in the sunshine close to the path along which they were walking. His companion waxed so loudly eloquent about his prowess in having slain a reptile of the same species a few days before that he was asked to speak low lest the Adder should hear him and be off before he could photograph it. This heathenish admission of ignorance was most unfortunate, and stirred poor Sandy's theological sentiments to their profoundest depths. Affecting a great air of surprise he puffed in his beard, and with a fine mixture of scorn and sorrow exclaimed—"Och, mon, did ye niver read the Scriptures? Talk of an Adder hearing ye, indeed!"—doubtless having the natural history of the fourth and fifth verses of the fifty-eighth Psalm in his mind: "The deaf adder that stoppeth her ear; which will not hearken to the voice of the charmer, charming never so wisely."

The foregoing picture of the reptile was made before it was added to a long list of victims in our friend's mental calendar of destruction.

On the occasion of this second visit a pair of Peregrine Falcons were breeding at the far end of the beat, eleven miles away across the mountains; and as the gamekeeper and his watcher were going to pay the place a visit in order to try to shoot the depredators, my brother volunteered to accompany them on their expedition. Accordingly they all started out at three o'clock one fine morning for the scene of action.

When they arrived at the cliff they discovered that the female would not be driven from her charge by any noise they could make by hand-clapping

or shouting, so it was arranged that the watcher should frighten her off by firing his gun. This was done, and she instantly fluttered out. Bang! bang! bang! went three shots, and away flew the Falcon fatally wounded, according to the verdict of her would-be slayers.

They now descended to a cottage some little distance below, and waited to see whether the male bird would turn up to take his share of the labours of incubation. In a little while he flew into the eyrie, and the keepers crept stealthily towards the place. As soon as they arrived at a satisfactory point one of them cried out, and their chance came. Four barrels were emptied in a skyward direction, but despite this liberal expenditure of lead the Peregrine sailed away, apparently none the worse.

Both birds subsequently returned to the eyrie as full of life and mischief as when they left it.

The Merlin, or "Stone Falcon," as it is called in some parts of the country, is the smallest and pluckiest winged enemy the moorland gamekeeper has to contend with. It breeds in the deep heather and preys upon young Grouse and small birds, which are plucked on little "knowes" at some distance from the nest, round which there is hardly a feather to be seen. Last summer we were shown a nest on the Westmorland hills containing four eggs, and succeeded in inducing the farmer, on whose property it was situated, to spare them and the young ones, which were subsequently hatched, and of which we made a photograph.

I have canvassed the opinions of many intelligent gamekeepers of wide experience upon the vexed question of killing hawks and owls, and although my sympathies are with the birds, I must admit that their arguments in defence of their action

are, so far as they are concerned, unanswerable. They say "We are poor men hired expressly to preserve game for those who love the sport of shooting, and as game and vermin don't thrive together we are obliged to look after the survival of the most profitable."

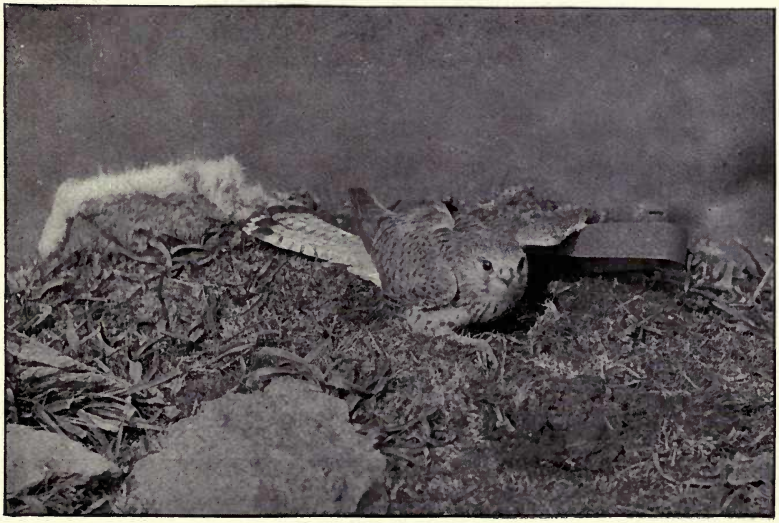
"I have no particular ill-will towards the birds you name," said one old fellow, "but is it likely that I can allow my own sentiment, or that of other folks whom I do not even know, to rob my wife and children of their bread-and-butter?"

Another said: "Now, look here, sir, people talk a lot of nonsense about the innocence of the Kestrel, which is really as bad a hawk as flies. I have known one keep on harrying my young Pheasants until he had carried off twenty-four, which would have been worth something like a pound a-piece to my 'guv'nor' if they had lived to be shot at. He was so artful that I could never get within shot of him. I have seen the rascal stoop and pick up a chick, and when I have fired my gun off drop it again from fear. In some cases the little creature would run back to its foster-mother in a coop, apparently none the worse for the adventure, but in others the bird would die from its injuries."

Other keepers have told us similar woeful tales about the Kestrel's depredations. It is shot as it leaves its nest, and occasionally trapped.

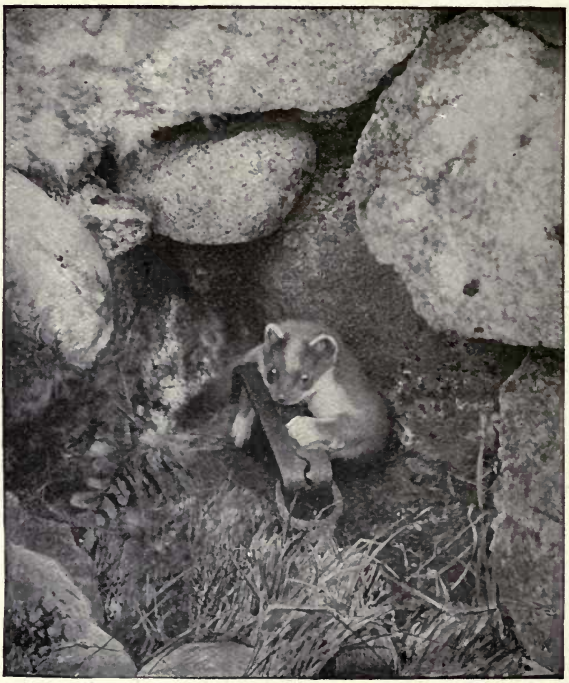
One day, whilst walking alongside a dry wall dividing a newly-planted copse from some grazing land in the Highlands of Scotland, we noticed a hummock of freshly-piled stones which excited our curiosity. Upon examining it, we discovered a vermin trap and the hind leg of a Mountain Hare inside it. On repassing the same place an hour or two afterwards, we were much amused by a young

YOUNG MERLINS.



KESTREL IN TRAP.

Pheasant running down a cart-wheel rut for a considerable distance before it could get out. Just when the downy little creature came opposite the hummock of stones, a break in the side of the rut enabled it to escape and disappear in the copse.



STOAT IN TRAP

On stopping to watch him it occurred to my brother to examine the trap again, and upon doing so we were surprised to find that it held a wicked-looking Stoat firmly within its grip, and a photograph was at once taken of the unfortunate captive.

I have often trapped these little animals with what is known in North Yorkshire as a "Samson Post," and in other parts of the country as a "Figure of Four," from the resemblance which the

HEDGEHOG.

FIGURE-OF-FOUR TRAP.

sticks when set in position bear to that numeral when written in the old-fashioned way. In encompassing the destruction of Stoats and Weasels, I have always been far more successful with the flesh of a Blackbird as bait than that of either a Grouse, Plover, Starling, or Rabbit.

Hedgehogs are ruthlessly slain by gamekeepers on account of their mischievous habits amongst the eggs and young of Partridges and Pheasants. They are easily caught in figure-of-four traps.

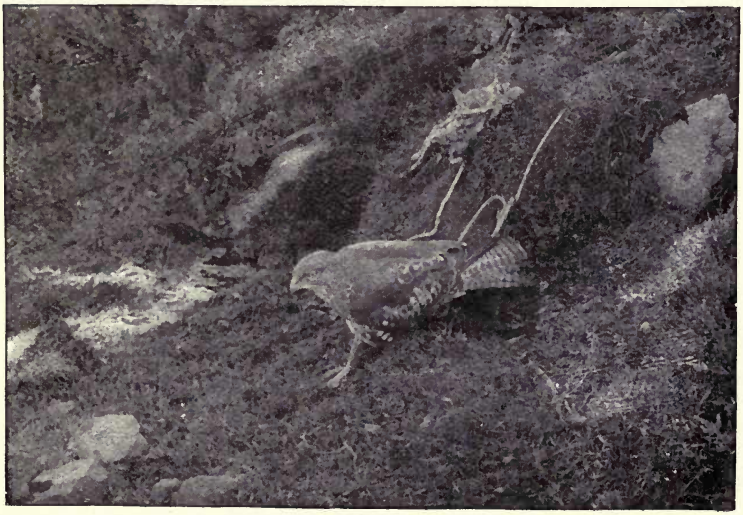
As an instance of the vexatious losses gamekeepers whose beats are near large Rookeries suffer, especially in dry springs, my brother had a Pheasant's nest containing seventeen eggs—doubtless the production of two females—shown him in Mull in 1896 by a couple of gamekeepers, who were naturally proud of the clutch. Happening to pass the place a few days afterwards he noticed three or four Rooks fly up from the nest and alight on an adjoining tree. Upon examining it, he found only three eggs of the seventeen remaining intact.

I used to help a Yorkshire gamekeeper to dissect Rooks which he shot and poisoned in the spring on his moor, which in droughty weather they would fly nine or ten miles to visit, and have a very vivid recollection of his pardonable rage when we found pieces of the shell of Grouse eggs in one or two of them.

On one occasion I watched a number of Rooks pull the nearly-fledged young ones out of a Blackbird's nest situated in a large hole under the top "through" of a dry stone wall close to Kirkby Stephen in Westmorland.

Although Rooks are very interesting birds, I am sorry to say that I regard them under certain conditions as little less mischievous than Carrion Crows.

YOUNG RAVEN ON NEST.



BUZZARD IN TRAP.

A Scottish game-watcher once told me that whenever he shot a hen Raven as she flew off her nest, if he could not secure the eggs the cock always devoured them, and then went off in search of a fresh mate.

Whilst in the Highlands of Scotland my brother was shown a projecting crag covered with grass and moss, in the side of a corrie, upon which a young gamekeeper told him a male Buzzard deposited food for his sitting mate, whose nest was situated some forty or fifty feet away. It had then lying upon it one young rabbit, not quite half-grown, and fragments of others, but so far as he could see no birds of any kind. As it was in a fairly accessible position he descended to it, and made a photograph, which is here reproduced.

Although I do not think the common Buzzard is regarded as a particularly dangerous bird by game preservers, it is trapped in the following manner: A young rabbit is killed, and after being partly flayed is tied down in a spring or small stream. This done, a little knoll is built close beside it, and a trap, carefully hidden by moss, placed on the top. No sooner has the unsuspecting bird espied the tempting meal than it either alights on the knoll or drags the carrion thereon to devour it, and is caught by one or both legs, as shown in our illustration on the preceding page, which is from a photograph taken in the Hebrides.

The Red Grouse is the only bird which we can claim as purely indigenous to the British Isles. Incredible sums are now spent every year for the privilege of rearing and shooting the bird; and so exhilarating is the sport that I have known well-to-do farmers tramp thirty or forty miles a day as beaters for three shillings and sixpence and

BUZZARD'S LARDER

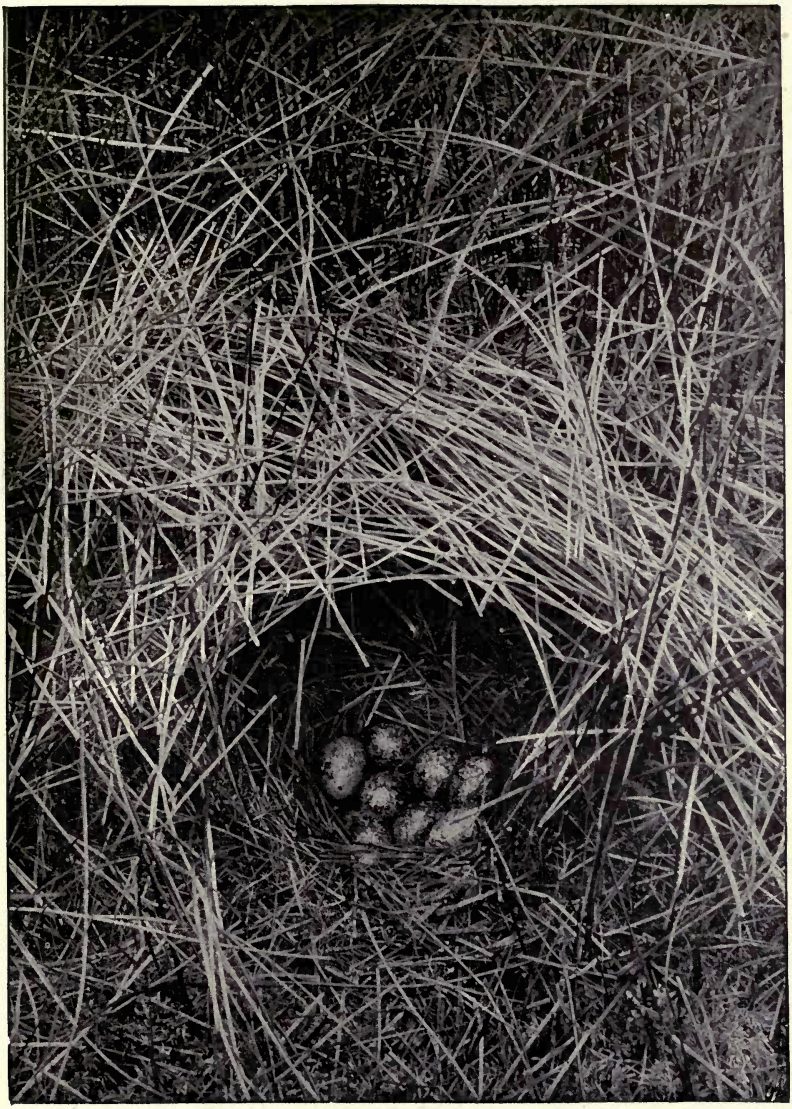
their luncheon, and declare that sooner than miss the fun they would rather pay to be allowed to go driving "Moorcocks."

The illustration opposite shows a Grouse's nest in a bed of rushes—a situation in which I have never seen or heard of one before. It was found by my brother in Westmorland last year. Grouse sit very closely upon their nests. I once knew a

YOUNG GROUSE

clumsy shepherd tread upon one, and the poor bird left all her tail feathers firmly pinned betwixt the edge of her nest and his iron-plated boot toe.

A good gamekeeper having a Grouse moor under his charge takes pains to be on the best of terms with shepherds, as a clutch of eggs is easily trodden on by accident or otherwise, and the driving of a flock of sheep at a brisk pace across a few acres of heather in May is likely to produce a good deal of disappointment in August. Shepherds' dogs, too, often need careful watching, as they will occasionally



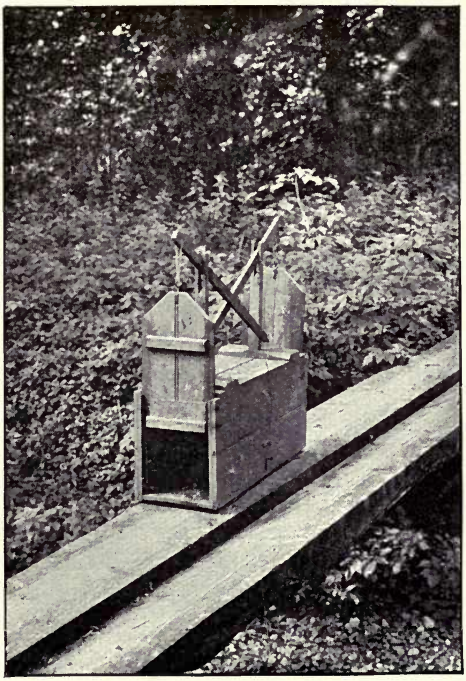
GROUSE'S NEST IN RUSHES.

kill sitting hens before they can get off their nests and swallow wee "poults" in the most business-like way. I knew one great lanky conspicuous-ribbed mongrel in North Yorkshire that was guilty of this and another curious practice. He must have been of French extraction, for he would swallow young frogs as fast as he could find them.

Sheep farmers' cats often take to a feral life and do a great amount of damage amongst Grouse in the breeding season. Some five or six years ago I was out with a gamekeeper in the North of England after a Sparrow-hawk that had made her nest in a little ghyll which divided a number of heather-clad pastures that were full of sitting Grouse. In crossing one of these pastures, on our way to another part of the beat, we came upon an ominous-looking train of feathers. In one direction it led to a headless female Grouse, and in the other to a nest containing seven eggs, from three of which protruded the cold tips of little beaks. I stood by looking on in sad silence, whilst the keeper vented his rage in entirely unprintable language. We turned back into the ghyll where my companion had some steel gins hidden, and whilst he made a stone passage five or six feet long by twelve inches high and seven or eight wide, I took off my jacket and tickled a mountain trout under a moss-clad boulder. The stone passage was built on a fairly level bit of ground, close to some great loose rocks under which the feline depredator was probably hiding at the time. The trout was suspended in the middle of the passage, and a trap carefully covered with moss laid on the floor of it at either end, and the next morning that keeper avenged the headless Grouse. No cat can resist a trout as bait, and no gamekeeper who knows his business ever

talks about victims of this kind, or owns to having seen a cat of any colour, size, or shape on his beat.

In the South of England, where the conditions are different, mischievous cats are caught by a trap popularly known amongst some keepers as "Bill Adams," from its terribly destructive character. It is baited with a herring and often placed on a plank thrown across a stream, as shown in our illustration. Just as pussy steps softly beneath a kind of triumphal arch, its weight releases a bit of cunning machinery, and a couple of doors swiftly close, one before and one behind, and all chance of escape is instantly cut off.

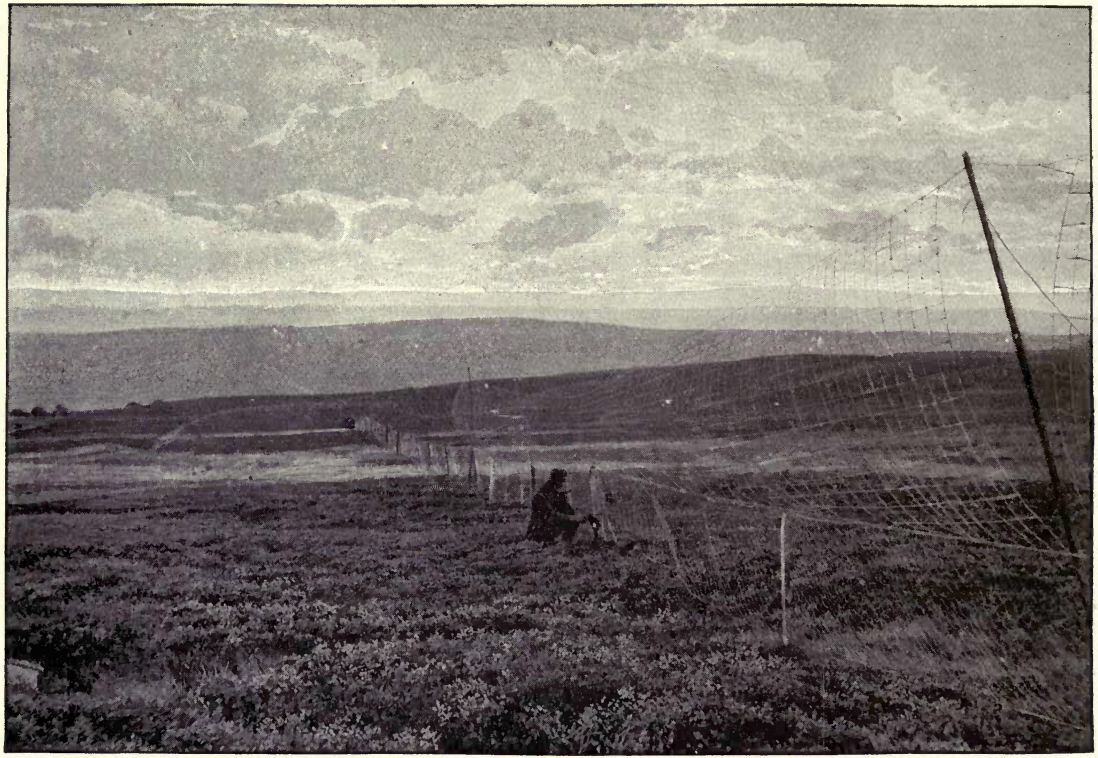


CAT TRAP

I recollect once seeing an old Yorkshire gamekeeper catch a Fox in a very ingenious and, I should think, ancient form of trap, which he called a "kist," probably a corruption of chest. He had traced the animal into a hole amongst some rocks, just after a fall of snow, and barred it in by carefully walling up every means of egress. This done, he levelled and roughly flagged a path seven or

eight feet in length, and leading straight away from the hole at which the Fox had entered. Upon this path he built a substantial passage, nine or ten inches wide by twelve or thirteen in height, which narrowed somewhat abruptly at its outer end into a mere slit through which it was impossible for the prisoner to escape. About one-third of the distance from the end of the passage, built over the hole by which Reynard had entered his lair, the stones forming the sides and roof were so arranged as to allow a heavy slate to work up and down with ease in the form of a sluice. The slate had a hole through its upper part, and to this was tied a strong piece of string which was passed over a smooth stick arranged like a trestle close to the slate, so as to suspend it in a perfectly plumb position and thus allow it to work up and down with ease. The string then ran forward to another trestle placed almost directly over the outer end of the passage, and finally ended in a small brass ring, which was passed over the end of a short piece of stick protruding horizontally from the slit. Directly the Fox came forward along the passage and began to sniff the fresh air and try to widen the slit by scratching, he put his foot on the inner end of the stick and at once so depressed it that the brass ring slipped off its opposite end and released the slate, which instantly fell and effectually barred retreat to his stronghold in the rocks.

Foxes caught in this way are often shown round amongst hill farmers, who are very glad to see such inveterate enemies of their Geese in captivity, and then ruthlessly slain, or taken to some huntable part of the country and turned down in front of a pack of hounds.



GROUSE NETTING.

A farmer, whose flock of Geese suffered severely on a Fox-infested moor in the North of England, conceived the notion that if he hung a small bell to the neck of his Gander its tinkling would scare the marauders away. The idea answered its purpose admirably for a while, but the cunning thieves soon came to understand that it was a harmless contrivance, and actually killed the bird wearing the noisy piece of metal.

The Grouse poacher used to be a great thorn in the side of the man of velveteen, but he is now an almost vanished figure.

I know one old man well who years ago used to don a white shirt and pair of sheep-shearing drawers of the same colour over his ordinary attire, and on a bright moonlight night, when snow lay thick upon the ground, he would steal forth from his house, which stood on the edge of a moor, and creeping quietly up to a flock of sleeping Grouse, deal death amongst them by a shot from his old single-barrel, directed where he saw the most birds in line.

Although the Grouse poacher of the picturesque old school has almost disappeared, his place has been taken up by a man here and there, where peculiar circumstances permit it, whose methods are loudly anathematised by sportsmen, and especially by those whose game he bags. We have been fortunate enough to secure an interview with one of these men, and a series of photographs of him at work with his engines of destruction.

He rents a small piece of heather-clad freehold land, surrounded by some of the very best Grouse moors in the British Islands, and as soon as the shooting season commences he plants two thousand copper wire snares, which he calls "hanks," in the

sheep tracks, along which Grouse love to run, and erects nets in such positions as the birds are likely to fly over in entering or crossing his domain. These nets are seven or eight feet in height by about one hundred yards in length, and he sometimes secures as many as thirty victims at a time in one of them.

Occasionally, when a bird is flying with a strong wind behind it the impetus derived from its increased speed will drive it clean through the net, but the threads forming its meshes are not broken without doing some damage to their destroyer, which drops on the other side either dead or with both wings broken. If a Grouse happens to strike the wire from which the net is suspended with its neck, it at once decapitates itself, and the severed head generally twirls high in the air.

This man has sometimes taken as many as fifteen brace of Grouse out of his snares in a single morning; and, as will be seen from the picture on page 159, he very obligingly allowed himself to be photographed in the act of resetting one from which he had just obtained the bird protruding from his jacket pocket. These snares are particularly destructive, because driven Grouse fly into the bit of freehold as a haven of rest, and when they have been shot at and thoroughly disturbed they run about in a state of agitation, and many of them become fatally entangled in the innocent-looking bits of wire.

The old man also shoots a bit, and has a favourite pointer bitch, eighteen years old, and so infirm that she cannot leap over a wall of any height worth mentioning. Her master, who is very fond of his canine friend, therefore lifts her on to the top of any stone fence they desire to cross, and there she sits watching him until he himself has

surmounted the obstacle, when he tenderly conveys her to the ground.

She is quite conscious of the great esteem in which she is held, and imposes upon her good-natured owner accordingly. When the time came for her to have her portrait taken along with her master and their day's bag, she obstinately refused to sit until a piece of warm dry carpet had been provided for her especial accommodation and comfort. The old man explained her conduct just as if he had been talking about his wife. She had been suddenly woke up from a sound sleep, and was indulging in a bit of temper on account of not being allowed to finish her nap.

The lessee of the surrounding moor has tried many more or less ingenious devices to spoil the old fellow's sport and reduce his plunder, but with little success. A brace of tethered Falcons, so placed as to scare the Grouse away from his bit of freehold, came within legal reach of his gun and perished; a number of flags erected all round mysteriously disappeared one dark night; and a wooden hut, built for the accommodation of a couple of watchers, accidentally caught fire whilst its occupiers were supping of sociability at some farm-house in the valley below.

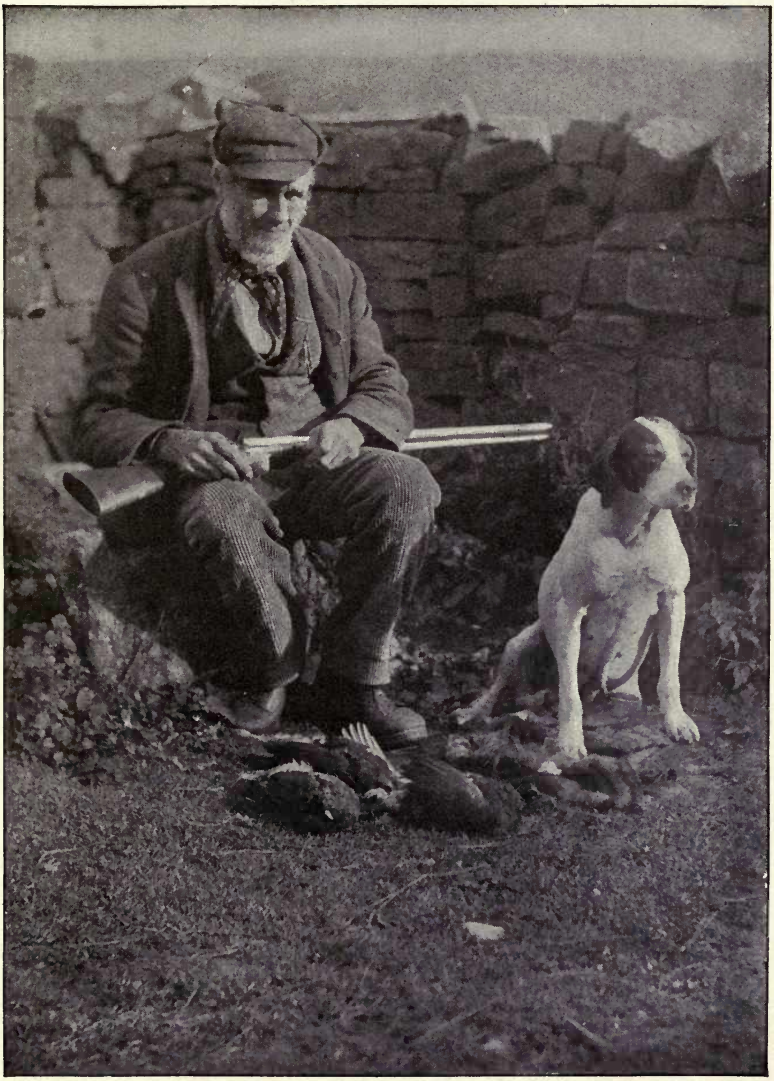
Of course, it is not illegal to snare or net Grouse, however unsportsmanlike it may be considered, provided the man who does so is upon land where he has the necessary right to do so, and is armed with a licence to kill game; but he must take all his snares up on Saturday night, as the law resents the Sabbath being broken by profane bits of wire hanging about like round O's amongst the heather. Our old friend was caught napping in this direction last year, and was fined for his wickedness.

SNARING GROUSE.

A favourite method of poaching Grouse by those who still indulge a little in illicit gunning is known as "becking." It is a much more sportsmanlike business than netting or snaring, and is often usefully employed by gamekeepers in October and November for killing off a number of superfluous and very artful old cocks that stick to the higher ground.

When I was a lad I used to go "becking" with a keeper nearly every suitable Saturday morning in the late autumn, and have probably lured more Moorcocks to their destruction in this way than any youngster living. My companion was an excellent shot, and together we have on many occasions bagged six brace of birds by breakfast-time.

"Becking" consists of getting up very early in the morning and reaching the deep moss hags before the first peep of day. I have on many occasions called a bird within shot before there was sufficient light to see it by whilst on the ground. At the very first suggestion of day-dawn Grouse begin to stir; the males fly twenty or thirty feet into the air, and come down slowly with their heads thrown back and their tails erect, whilst they utter their resounding "err, beck, beck, beck," and alighting on a "knowe," finish with a more deliberate "go-back, goback, goback." The females utter their peculiar call-note, which is much easier to imitate than to represent by the characters of the alphabet. It sounds something like "yap, yap, yap," or "yowk, yowk, yowk," and can be reproduced by compressing the nostrils with the index finger and thumb and then emitting the breath in sharp, forced gasps. There are various other methods of calling, but by far the most successful is that of sucking quickly at the stem of a clay tobacco-pipe. With the bowl



A COUPLE OF VETERANS.

of an ordinary "churchwarden" and six or seven inches of stem, I would at any time undertake to create such magic sounds as would effectually deceive the most experienced gamekeeper, shepherd, or old cock Grouse that ever crossed a moor.

The great secret of successful "becking" is to get on to the ground where it can be done before the birds begin to stir in the morning, to keep well out of sight, and to call creditably.

As a rule, Grouse are very talkative, and come well to call on frosty mornings between the first peep of day and sunrise; but directly the sun shows its ruddy disc above the Eastern hills, they become as silent as the grave. The fact is grace has been said and breakfast begun. On some mornings when conditions appear to be ideal the birds are almost silent, and keep on flying restlessly to and fro, and a wet day generally follows. Most poachers who go "becking" prefer a misty to a frosty morning, as the birds will come quite as well to their imitative blandishments, and often continue to do so right up till noon; hiding is also easier, and the report of a gun travels but little.

On frosty mornings birds will fly long distances, by stages, to answer a call, and I have brought them so close that a shot would have blown them to pieces. Hens often respond quite as well as cocks. If the "becker" happens to start calling close to a company of Grouse, an old male will run up on to a "knowe" or other eminence, and if he catches sight of his deceiver at once utters his alarm-note of "Cock, cock, cock!" and flies away; but if not, and he is bowled over, another and another will in all probability run up and take his place until four or five victims have been accounted for.

It is a glorious experience, and one which I have enjoyed many, many times, to sit on a bit of bleached sandstone at the bottom of a peat hag during a fine November morning and watch the rising sun purple the Eastern sky, whilst all around the Grouse are making the air ring with their noble music. It sometimes happens that when the whole countryside appears to be literally alive with birds a sudden silence falls upon the land, and the listener is at a loss to understand the reason why, until a distant hoarse croak or the appearance of a black speck far away up in the sky tells him of the presence of a Raven.

Grouse are occasionally driven to terrible straits in winter time. Whilst the snow is light and powdery they easily scratch their way down to the heather, or the wind soon bares exposed situations and renders their food accessible; but if a heavy fall of snow should occur in a dead calm and then be immediately followed by a partial thaw and hard frost, their sustenance is hermetically sealed and they are reduced to an almost helpless condition.

In the memorable winter of 1895 great numbers of Grouse perished from starvation on the Northern hills; and whilst nest-hunting in Westmorland ghylls and Yorkshire dales the following spring my brother and I found skeletons every day, coming across as many as eight in the neighbourhood of Kirkby Stephen on a single ramble. During the extremely rigorous weather it was not an uncommon sight to see the bolder ones feeding unconcernedly along with barn-door Fowls in farm-yards, and even running along the streets of market towns. Whilst in the valleys they fed upon hips, hazel catkins, and the buds of hawthorns, and, curiously enough,

some of them roosted in the trees in which they fed. I had several birds that had been starved to death sent to me for dissection, and not one of them had a piece of gravel in its gizzard. The crop of one female, which had apparently died just after feeding, contained no less than 4,225 buds and small pieces of slender twigs. Some idea may be gathered of the privations these poor birds had to endure when it is mentioned that one male sent me only turned the scale at sixteen and a half ounces. He came from Upper Swaledale, where the late Mr. George Brook, an exceedingly careful observer, killed male birds in the late autumn weighing twenty-eight and even up to thirty-two ounces.

The accompanying illustration represents a friend of ours and his loader in the act of shooting driven Grouse on one of the best moors in the North of England.

Pheasant rearing is the most important business of a woodland gamekeeper's life. The eggs are gathered from hedgebanks and woods and placed under barn-door fowls in hatching-boxes, which are all numbered and dated on the lid or door, so that the keeper in charge can tell when the chicks are due to appear. The picture on p. 167, representing a pheasant hatchery, was obtained on one of the largest and best preserved mixed game estates in England. In front of the hatching-boxes was a double row of wooden pegs driven into the ground, to each of which was attached a piece of string with a running noose at the end. When the fowls were taken off the nests to be fed the noose was slipped over one foot, and the string being so arranged in regard to length as to prevent one bird from interfering with another, quarrelling and stealing each

GROUSE SHOOTER IN BUTT.

other's food were effectually avoided. A quantity of food, also a dish containing a supply of fresh water, were placed beside each peg. Seventeen pheasants' eggs are placed under an average-sized hen, and the keeper who sees fifteen chicks out of this number is well pleased. A dry, hot season is considered worse than a warm damp one for hatching purposes, and during the prevalence of the former kind of weather the eggs are slightly sprinkled with water whilst the hen is off feeding. In spite, however, of this helpful precaution many chicks die in their shells, apparently without the necessary strength to break forth. In addition to dogs chained up at different points, this hatchery was encircled by a fine copper wire, placed about a couple of feet from the ground and attached to the trigger of an alarm gun affixed to the window-sill of the keeper's sleeping-room, from which he could instantly bolt after any prowling egg-stealer.

Pheasants' eggs vary considerably in intensity of coloration. Lord Walsingham's head-keeper told me that stiff clay land on which pheasants feed produces dark-coloured eggs, and a light, sandy soil pale-coloured ones, and this contention he certainly supported by several instances which he brought under my notice, although other keepers to whom I have mentioned the circumstance have no faith in its accuracy.

One of the most marvellous provisions of Nature for the protection of a bird during a vitally important period of its history is the one first pointed out by Mr. Tegetmeier of the *Field*, a veteran pheasant-rearing authority. He discovered that whilst a hen pheasant is sitting on her eggs in a wild state the natural scent thrown off her body at all other seasons of the year has the course of

PHEASANT HATCHERY.

its travels reversed from outwards to inwards, and passes away with the excreta, thus rendering the bird's chances of discovery by a prowling enemy materially less.

When young pheasants are hatched off they are placed out in a clean field in coops, along with their foster-mothers, and watched night and day by the keepers in charge. In spite of this, how-

PHEASANT ON NEST.

ever, they are sometimes stolen, and I know one keeper in the Home Counties who had nearly all his young birds taken away in a single night, although they were being guarded by two watchers, who had unfortunately had too much beer and gone to sleep, and a retriever dog.

The life of a gamekeeper who knows his duty and does it conscientiously is by no means the sinecure some people imagine. For, in addition to destroying troublesome vermin of all kinds, he has to circumvent the plans of men who often know quite as much as himself. With the genuine poacher,

who is well-versed in field-craft and matches his wits squarely against those of the gamekeeper and the wild creatures he desires to capture, I must frankly confess to a great deal of sympathy, for he is often impelled by the same instincts as the best sportsman, whose privileges he lacks the enjoyment of,

PARTRIDGE ON NEST.

frequently by a mere accident of birth. I have known such men personally, and in their characters there was not any other moral kink whatsoever. One such fell upon evil days mainly through the ruin of his health by exposure, and was at last compelled to pawn his trusty gun in a small provincial town. As it was not redeemed within the allotted period of time it was placed in the window for sale. The decrepit poacher happened to be hobbling past one day on two sticks, and after

eyeing his old single-barrel wistfully for a few moments the tears began to trickle down his weather-beaten face, and he walked sorrowfully away. But this is only one side of the picture. In addition to thwarting the incursions of men who go poaching in response to natural instincts, gamekeepers, especially near large industrial centres, have to face gangs of despicably cowardly ruffians who know next-to-nothing of the habits of the game they go after, and are impelled by exactly the same motives as would send them to housebreaking.

As a result of various encounters with this class of poacher, the gamekeeper whom I have just mentioned had his hands scarred from savage bites and his temples disfigured by kicks from inhuman brutes, besides carrying in his body more than forty pellets of shot deliberately fired at him by a dastard whom he was pressing too closely in a fair open chase.

Partridges are very curious-tempered birds, and will often forsake a nest full of eggs for no other reason, apparently, than that it has been discovered. By careful stalking, we secured the picture on the preceding page of a partridge as she sat on her eggs in a hedge bank, without disturbing her.

The birds are poached in various ways, and in most of them some well known natural habit is turned to account in order to encompass their destruction.

In the evening the mother of a covey calls her chickens together to "jug" in a small circle with their tails all turned inwards towards the centre. The old male generally sleeps a little apart by himself, and acts sentinel; but in spite of his

vigilance a couple of poachers will, with the assistance of a long net, often kill his mate and all their offspring. The net is dragged along the ground with the top well forward, and directly a covey attempts to rise it is dropped over them and they are doomed. To prevent this kind of destruction gamekeepers "bush" the fields in August, and thus save their game.

PARTRIDGE.

(*Photographed on the Westmorland Hills after a Storm.*)

Partridges are, like Grouse, amenable to an artificially-produced call if their peculiar skirling cry be successfully imitated. A Surrey farmer once told me that he had in years gone by lain in the corner of a field and lured lots of birds within shot by means of a call made and used in the following way:—He took an ordinary sewing-thimble, and grinding the end away, tied a piece of parchment over the hole so tightly as to render it resonant, and making a pin-hole through the centre, threaded it on to a piece of catgut or horsehair. By holding

one end of the catgut or horsehair between the teeth and the other round the index finger of either hand, he could by moving the thimble up and down reproduce the call-note of a Partridge. In order to prove the value of this information before making use of it, I constructed a call for myself, and was surprised by its effective strains.

Hares are, and probably always have been, much sought after by poachers of all kinds. Only the other day an old man, bent almost half-double with age and carrying a hamperful of groundsel upon his back, called at the back door of a house occupied by a neighbour of mine, and when he found he could not dispose of any of his ostensible stock-in-trade he glanced round furtively, and then promptly dived his hand through the groundsel and pulled a splendid Hare forth by the leg and offered her in a whisper for three-and-sixpence. The old fellow had doubtless snared her as she came through some favourite run in a hedgerow.

The commonest way of illicitly catching the animal in the North of England is netting it by night.

When a lad of seventeen I was very anxious to know exactly how this was done, and accordingly ingratiated myself into the confidence of a couple of poachers, and accompanied them one night after a heavy fall of snow on to some property which, curiously enough, belonged to my paternal grandfather. I think they were desirous of scaring me at the offset; for after telling all sorts of tales about narrow escapes from keepers whom we all knew quite well, they set me to watch a net stretched across a field-gate leading into a lane. I had stood waiting in fear and trembling for some time, when a black figure quietly rounded a bend

in the road and came swiftly towards me. The consciousness of my guilt made me jump to the conclusion that it was a keeper, and my heart started thumping wildly against my waistcoat, as it was impossible for me to run away; and there were special circumstances for making capture particularly disgraceful. Without stirring a foot, I jerked the net from the gate and instantly thrust it beneath my waistcoat, and waited with as much composure as I could summon. If ever piety had the upper hand of wickedness it was at that moment, for the dark figure turned out to be our minister going home from a prayer meeting. The sound of his soft "Good-night" relieved me beyond the telling; but I fear I added all too readily to my sum total of iniquity by asking him to tell an imaginary chum along the road "to hurry up."

There could be no disputing that I had got a thorough fright, but after a few weeks I had so far got the better of it that I went out again on the same quest. One of the poachers, who was a keenly observant fellow, knew a meadow where a Hare came off the hills to feed every night, and we accordingly started about eight o'clock one evening to try to catch her. When we arrived at the gateway by which she entered, a recently-fallen shower of snow showed plainly that she was in the field. A net was hung lightly across by means of a little bob of sheep's wool thrust into the interstices of the stone wall on either side. I remained crouched down behind the fence with one of my companions, whilst the other and a rough-haired cur went by a circuitous route to the far side of the field.

In about ten minutes we heard a scuffling kind of rush, and an instant afterwards the net flew off the gateway in a great brown ball and rolled several

feet along the ground, and the still night air was rent by the most piteous child-like skirling I ever had the ill-fortune to hear. The noise was of short duration, however, for the poacher with whom I stood threw himself upon the Hare and net and ended poor Pussy's squealing for ever. The dog

HARE-NET ON GATE.

never uttered a sound of any kind, and I only saw it once as it peeped between the bars of the gate through which the victim had come until we all met behind an old barn in a lonely place half a mile away.

Hares will often take a net set in this way in broad daylight if they are hard pressed by a swift dog, and the accompanying pictures, taken by special arrangement with the man in them, illustrate how the trick is done.

I knew a cunning old gamekeeper in Yorkshire who used to frustrate the efforts of people who practised this kind of poaching by what he called "mistetching" the Hares on his beat every autumn. He netted as many of them as he could himself, and then turned them loose again. The conse-

THE HARE CAUGHT.

quence was that a Hare that had once struggled within the meshes of a net would rarely go through a gateway or sheep-creep (a hole in a stone wall to let sheep through from one field to another) unless absolutely forced to do so by an exceedingly swift dog. I have seen a Hare which this man had had in a net leap a stone fence quite six feet high. She bounded on to it sideways, and then leapt quietly down on the other side.

These animals have a peculiar habit which they

always practise just before going on to their forms. It looks like a reasoned action deliberately executed to mislead prowling enemies that track them by the scent left in their footprints. It consists of travelling almost straight for a given distance, and then doubling back right along their own path again thirty or forty yards, suddenly leaving it altogether by a tremendous side-bound, and going away at right angles to their original path for some distance before retiring to rest. This curious performance is generally gone through only once. However, I have known it repeated two or three times before a fastidious animal had become satisfied with its daylight quarters.

When snow lies thick upon the ground and the wind has drifted it, Hares often make their forms in a peculiar manner. It is called in the North of England "coaving" (undoubtedly a corruption of caving), and consists of driving a tunnel almost through a sloping drift of snow and then sitting all day at the end of it.

Many snowdrifts do not touch the wall they are driven against, and there is frequently room for a man to walk in comfort between them.

I once saw a Hare in a burrow of this kind, and she had made a small hole as big as a man's waistcoat button through the front of the drift, and had one eye fixed close up against it. Poachers sometimes succeed in throwing a net over the poor creatures as they sit in these snow burrows.

Occasionally Hares are shot on bright moonlight nights as they feed upon the snow; and I knew one old poacher who, though in easy circumstances, had the spirit of the thing so strongly in his blood that, even when bent double with rheumatism, he would leave the warm fireside of his farmhouse,

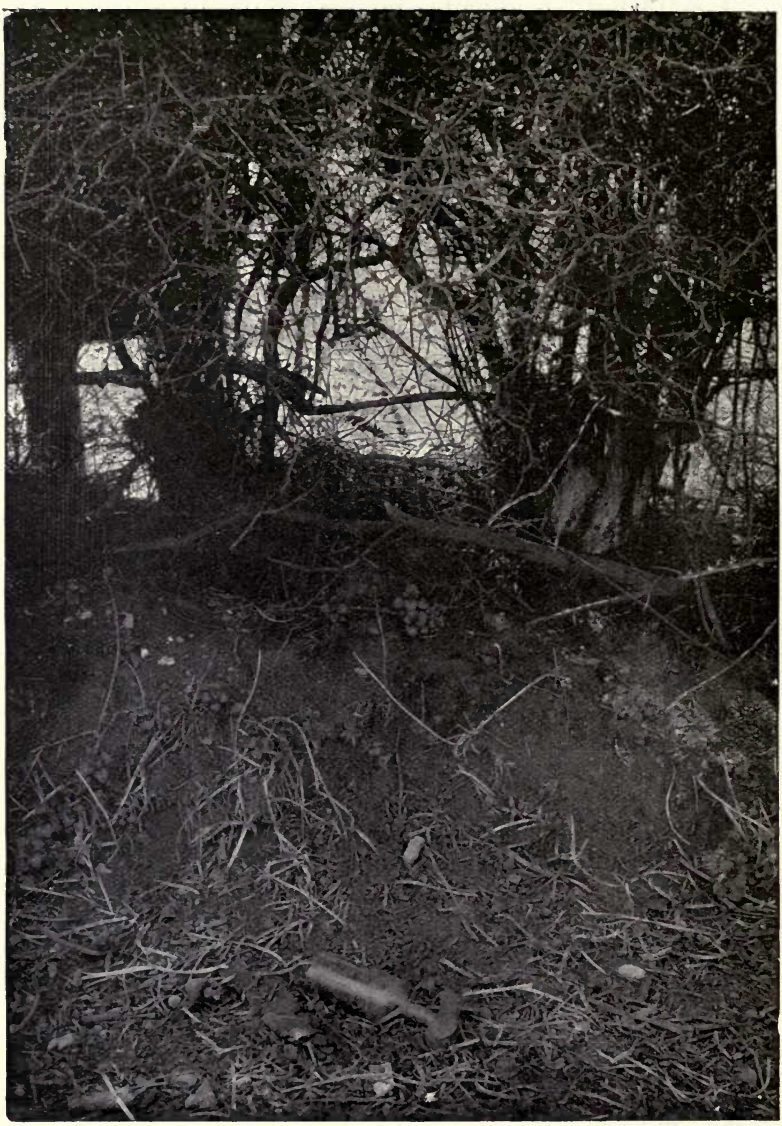
and induce one of the men-servants to carry his gun for him whilst he hobbled painfully along on two sticks. As soon as the old fellow got a shot his younger companion used to bolt with the dead Hare and gun at the top of his speed, and leave his employer to crawl home at his leisure and without sign of guilt. This was, of course, before the Ground Game Act placed Hares in the hands of farmers.

I recollect another old farmer whose greed rather than original instincts prompted him to set steel gins in watercourse-holes, through stone walls, on his farm for the Hares that used them; but he had the spirit of his enterprise broken by a good-natured keeper who, after playing off all sorts of tricks on the old fellow, ridiculed him into good behaviour by hacking off a dead Sheep's leg and putting it into one of his traps in such a way as to suggest that the animal had been caught and had torn it off.

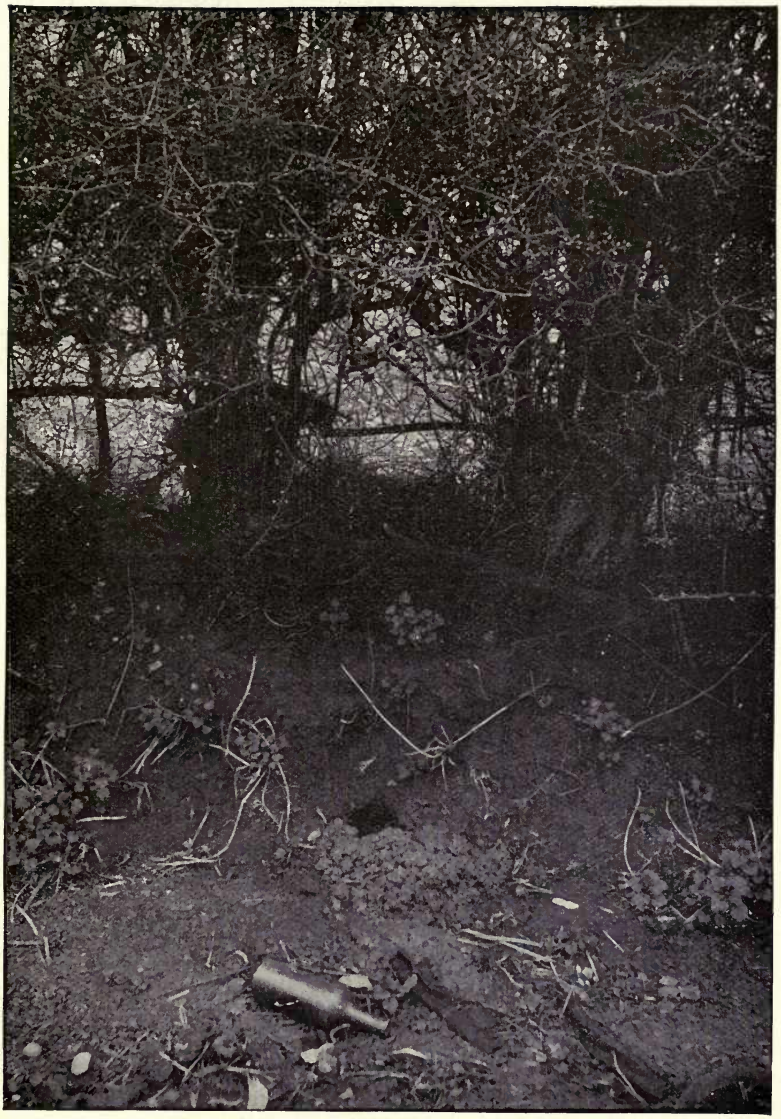
A Hare's love of parsley is well known by most rural folks, and I remember a quarryman who turned to account this knowledge and a bit of the herb growing in his back garden which abutted on some good game ground.

I believe it is a popular belief that Rabbits do not leave their nesting burrows open during the day-time until their young ones, which are born blind and remain so for eight or nine days, can see, and that if they are touched by human hands before they have acquired the sense of sight the mother will forsake them. We have proved both these canons of rural natural history to have, at any rate, their exceptions.

In order to give some idea of the effectual manner in which a Rabbit can hide the whereabouts of its nest, we made a photograph of part of a hedge-



RABBIT BURROW (CLOSED)



RABBIT BURROW (OPEN).

bank with one in it before the mouth of the burrow had been opened, and another after the owner had scratched the earth away.

Rabbits open their nesting burrows and suckle their young by night, closing them tightly with earth again when they leave them. I had a nest under close observation last spring, and was much interested to find that its owner scattered some old hay from a sheep foddering station close by over the mould with which she filled the entrance to the burrow every time she left it, a procedure which materially lessened its chances of being discovered.

When the small amount of earth lying patted down flat outside a Rabbit's nest, and the length and diameter of the burrow from which it has been excavated are compared, it always appears to me as if the owner must have taken some of the mould right away so as to lessen the conspicuousness of things, but I have not been able to gather any corroborative facts on this point.

During the early spring great numbers of young Rabbits are drowned in their nests through heavy rainfalls. Accidents of this kind no doubt contribute largely to keeping their numbers in this country in check, for such is the remarkable fecundity of the animal that it has been calculated a pair would, under the most favourable circumstances possible, produce not less than 1,274,840 in the short space of four years.

I have proved that they will increase the length of their nesting burrows after young ones have been born, if an injury to the thin crust of earth immediately over them should appear to jeopardise their safety. A friend of mine, on whose farm a number of Rabbits breed every year, cut the sod immediately over the nest of one away in

the spring of 1896 in order to show its downy little occupants to his wife. I visited the place a week later, and upon examination discovered that the burrow had been dug quite six inches further in, and most of the nest and young ones transferred to the new quarters. There was also a quantity of newly-excavated earth outside the mouth of the burrow. As the land in which the nest was situated was very wet, probably a leakage caused through the cutting of the sod directly over the young ones induced their mother to shift their quarters.

Rabbits are killed by poachers in various ways, most of which are well known to everybody. The animal's habit of using a fixed path in journeying between its burrow and feeding ground renders it liable to being caught in a snare during the night; and although some poachers are punctilious in regard to the suitability of an evening for putting snares down, I have seen a Rabbit run leisurely into one in broad daylight.

I was walking quietly alongside a wood in the neighbourhood of Enfield one bright Sunday afternoon last year, when I observed three Rabbits run down the field I was in towards the hedge dividing it from a wood. When within eight or ten yards of their goal, I noticed one of them suddenly turn a somersault. I was somewhat surprised to see him stay and repeat this gymnastic performance after his companions had disappeared through the hedge. He continued to tumble head over heels until I got close up to him, when I discovered that he was in a snare. Although in very good condition both his ears were a black swarming mass of fleas.

I do not think it is at all generally known that Rabbits will sometimes turn and bite their captors.

I was once severely bitten by one when a boy, and was greatly afraid I should die from hydrophobia in consequence, until I discovered by diligent inquiry that it was an accident which occasionally fell to the lot of gamekeepers and poachers.

RABBITS AT PLAY.

I also learned something of a still rarer accident which sometimes befalls an unlucky Ferret. If one be turned into a burrow, and finding a Rabbit fails to bolt it, a second is generally sent along to help him. Instead, however, of exerting their combined efforts to accomplish this, they probably, through jealousy, fall upon each other and one of them is generally dug out dead.

CHAPTER V.

NESTS, EGGS, AND YOUNG.

MANY people imagine that birds build their nests exactly alike, according to an undeviating pattern rigidly fixed for the instinctive guidance of each species; but such is certainly not the case, although it is truly wonderful how closely the different members of a species adhere to a general type of architecture.

The fact is, I believe, that birds, like human beings, possess individually varying degrees of intelligence, skill, and energy, and that differences in any of these qualities are to the close observer plainly marked in the constructive character of their work. Chaffinches, as a rule, build exceedingly neat, cup-shaped nests, as everybody knows, but not infrequently quite a slovenly structure, for the species, may be met with. Sometimes they are composed of green moss and lined with horse-hair only, at others the outside is liberally studded with bits of lichen and curtained with cobwebs, and the inside lined with horse-hair, cow-hair, rabbits' down, and feathers. It is said that bits of lichen are used on the outer walls of the nest to give it a general resemblance to the bark of the branches surrounding it, and although I must admit that in many cases the idea of harmonisation appears to underlie the ornamentation, it is certainly not

always the case, as some years ago I met with one the builder of which had thickly studded its outer walls with bits of an old newspaper, in such a situation that the journalistic decorations really increased rather than lessened its chances of discovery.

That individuals of a certain species begin to nest almost simultaneously in a given district I proved last spring, by finding thirteen Chaffinches' nests in various stages of construction on the 24th and 25th of April. On the other hand, some early pairs of Starlings had young ones hatched out before the last few dozen members of their winter flocks had fairly broken up.

Odd as it may seem at first sight, birds occasionally lose their lives by remarkable accidents which happen to them whilst engaged in the building of their nests. During a ramble one evening last spring, I came upon a female Chaffinch suspended by a strong horse hair within two or three feet of her almost completed nest. A hard baked worm-casting had cemented itself to one end of the hair, which had in consequence become twisted round a twig, and the opposite end so entangled about the unfortunate bird's neck as to form a running noose, and strangle it by its own efforts to escape. It was a most pathetic picture, and as my brother made a photograph of it, the poor bird's mate kept on calling for her and flying round in the most evident distress.

A Common Wren will build the outside of its nest of old hay straws when placing it in the side of a rick—as shown in our illustration on page 187, which my brother was lucky enough to secure just as the owner was about to enter—of green moss when situated in a mossy bank, and of dead leaves when

HEN CHAFFINCH HANGED BY A HAIR.

in a hedgerow, bramble bush, or amongst a few slender twigs sprouting from the trunk of a tree where a branch has been lopped off. I have met with several in the last two positions in woods, and I must admit that they very nearly escaped minute examination on account of their close resemblance to an accidental collection of leaves. These facts would, on the face of them, appear to prove that the bird in each case deliberately chose the materials for the outer walls of its nest in order that they should harmonise with their surroundings and materially lessen the chances of detection—an end which is undoubtedly attained, but whether by accident or design it is difficult to say. I am inclined to think the former, because I believe that birds, as a rule, build their nests with such suitable materials as lie handiest, although I remember an instance of a Wren flying over a quarter of a mile for the feathers with which she lined her little house. I was able to prove this, because those used were all off a particularly light-coloured hen Grouse, the skeleton and remaining feathers of which I shortly afterwards found.

Wrens build what are popularly known as "cock's nests," which are in every way equal to those in which eggs are laid and young ones reared, except for the fact that they do not contain a lining of feathers. These nests, I should say from my own experience, number quite three to one of those made for breeding purposes. Some ornithologists are of opinion that they are made to sleep in, but although I have met with members of the Tit family comfortably tucked away in them at night-time, I have never come across one occupied by a member of the species which built it.

Water-hens generally build two or three spare

WREN GOING INTO HER NEST IN RICK.

nests, of slighter construction than the one they actually occupy, round a pond, and Plovers often scratch out and prepare little hollows in which they never lay their eggs.

Some Sand Martins lay their eggs upon quite an elaborate bed of straws and feathers, whilst others in the same bank deposit theirs upon the scantiest lining of straws only. Individual nests belonging to birds of the same species vary considerably in point of size without any reference whatever to the character of the situation occupied, as the most casual glance at a number of House Martins' nests will prove.

In regard to hiding their nests, individual birds differ greatly. Last spring my brother and I found a Blackbird's in a hedge merely by the fact that the bird in building it had carelessly left a conspicuous trail of the materials she had used from the outside of the bush right up to the very nest. A schoolboy would have detected it through this slovenly piece of workmanship quite thirty yards away, as was doubtless the case, for the eggs did not remain long in it. On the other hand, within a hundred yards of it, I found the most cunningly-hidden Blackbird's nest that I have ever seen. I was looking round a friend's garden, when I came upon an old black horse's tail which had been thrown into a yew tree and lodged near the trunk, and about five feet from the ground. The thing looked curious, and, with an idea of examining it more closely, I seized the lower end and gave it a tug. To my surprise, a hen Blackbird fluttered out in great alarm, and I discovered that she had a nest and eggs on a branch close to the bole of the tree and quite behind the horse's tail, which, whilst forming a kind of curtain (it

was somewhat spread out) through which she could see, hid her and her nest most effectually from view.

I fear that, from an ethical point of view, the actions of many birds during the breeding season would not present a very edifying spectacle. I have seen a stable with upwards of forty Martins' nests under its eaves, half of which were occupied by Sparrows. Many of them were, of course, old ones, which had been confiscated between the departure and return of their rightful owners, but others had been forcibly occupied directly they were built. Indeed, I have witnessed a pair of Sparrows steal a Martin's nest before the outer wall of mud had actually been completed. If they happen to find eggs in a nest they have decided to raid they eject them, and I strongly suspect the young too, from the unfeathered little creatures I have found dead upon the ground directly beneath their nests. That Sparrows will also endeavour to steal each other's nests we have satisfactorily proved. Last spring my brother fixed a small box up against a brick wall just outside his bedroom window, in order that, with his camera hidden behind the curtains, he might make some photographic studies of the old birds feeding their young. During May a pair of birds took possession of the quarters prepared for their accommodation, and in due time a cosy nest containing five speckled eggs was the result. All went well until another pair of birds of the same species cast envious eyes upon the little wooden box with a neat round hole in front. One morning a fierce battle was the result, and when it was over, and the prodigious din had subsided, two broken eggs lay upon the window sill, a third on the garden

path, and of the two remaining in the nest, which was sadly torn about and dishevelled, one had a great hole pierced in its side.

Sparrows, in their turn, suffer from the dishonesty of Starlings, by which they are sometimes robbed of cosy holes they have taken much pains to make in the sides of hayricks. I once saw a Starling eject a pair of Sparrows from their nest in one of the divisions of a barrel-shaped pigeon-cote erected on the top of a pole. It was quite comical to see the usurper stand defiantly in the doorway of the house she had taken possession of, whilst the rightful owners talked loudly at a safe distance from her beak, or fluttered round without getting help or heed from a dozen neighbours sharing the same cote. When the Starling flew out, the ejected tenants hotly pursued her in a make-believe attempt at administering some wholesome chastisement, but she took not the slightest notice of their threats, and returned again unconcernedly at her leisure.

A pair of Starlings took possession of a Sparrow's nest built in a rose tree trained against the wall of a farmhouse near Shenley, in Hertfordshire, last spring, and reared their young in it.

A year or two ago, whilst my brother was trying to photograph a Song Thrush in the act of feeding her young in Mull, he was astonished to see a Wren hop up and boldly pull a piece of moss out of the side of the Thrush's nest and fly off with it.

I have watched Rooks steal sticks from each other's nests on several occasions, and once saw one endeavour to pilfer twigs from a Heron's nest close by her own, and receive a measure of well-deserved punishment for her dishonesty from the infuriated owner.

KESTREL'S EGGS IN A RAVEN'S OLD NEST

Whilst some birds are guilty of theft, others occasionally exhibit quite extravagant habits in regard to the materials with which they are building their nests; and I have often located the precise position of a Swallow's nest amongst the rafters of a high barn by a collection of feathers dropped, I have no doubt accidentally, to the floor. Ring-Ouzels, Blackbirds, and Song Thrushes occasionally drop quite a quantity of materials to the ground beneath their nests, but do not appear to trouble about picking them up again. In the course of my ornithological experiences I have known one or two cases of birds trying to build in impossible situations, and having their best efforts defied by the materials toppling over as soon as piled a certain height. I remember a place close beside a waterfall in a little Yorkshire ghyll where a Blackbird or Song Thrush attempts in vain nearly every year to build on an ideal but, unfortunately, all too narrow ledge of rock.

Occasionally a bird will build a new nest on the top of an old one belonging to the same species, and I have known this done even when the old one contained addled eggs. I once saw an old Thrush's nest which had been lined with fine grass and utilised by a none too industrious Blackbird. We have met with several disused nests belonging to the two last-named birds occupied by Harvest Mice, which had filled up the hollows in each with their own pretty little balls of grass.

Kestrel Hawks are extremely lazy birds when judged from a domestic point of view. They adopt the old nests of Ravens, Carrion Crows, Magpies, and Sparrow Hawks, soon foul them with their castings, and, when their young ones are hatched out, do not even trouble to remove the shells from

which the tiny down-clad creatures have struggled. The illustration on p. 191 shows a Kestrel's eggs in a Raven's old nest which had been half toppled over by a heavy fall of snow the previous winter. Before laying her eggs, the adapter had scratched the side of the structure out a little so as to create a hollow.

We have met with several Oyster-catchers'

OYSTER-CATCHER'S NEST.

nests, consisting of hollows scratched in nice dry, soft earth, and lined—or, more strictly speaking, paved—with empty winkle and other small shells picked up on the beach below, and in one case, in the South of Ireland, with one inlaid entirely with sun-dried rabbits' droppings.

Last spring my brother, whilst staying with a friend at his country house in Norfolk, was shown a hole in a hollow tree through which a pair of Jackdaws and innumerable Honey Bees were constantly travelling to and from their respective nests

in the utmost peace and harmony. The birds went down the trunk and the bees up it.

Birds of entirely different species sometimes share the same nest, and yet live and go about their business in perfect amity.

A few years ago I watched a pair of Rooks and a pair of House Sparrows, close to the Priory Road, Hornsey, feeding their young at the same time and at the same nest. The latter birds occupied the basement, having taken up their quarters amongst the sticks forming the foundation of the Rooks' nest.

In 1895 a pair of Starlings made their home and successfully reared their young amongst the sticks forming the Ospreys' eyrie shown in our illustration.

The picture was obtained in the Highlands of Scotland during a scorching hot day in the droughty summer of 1896, and represents the nest and adult birds of one of the two or three pairs of Ospreys now said to breed in the British Isles.

Whilst my brother was preparing to make a study of the eyrie and its builders perched on the dead tree tops from an adjoining island, the female, as if afraid the hot sunshine would do some harm to her exposed eggs, plunged headlong into the loch, and, rising, shook her dripping wings over them, after which she quietly resumed her favourite perch.

As a gratifying indication of the increasing interest taken in natural history by the people at large, hardly a week passes in the springtime without the newspapers recording a curious nesting-place chosen by some bird. Robin Redbreasts naturally come in for a large share of journalistic attention, and I am constantly having cuttings sent me by friends who know I study the subject.

PAIR OF OSPREYS AND THEIR NEST.

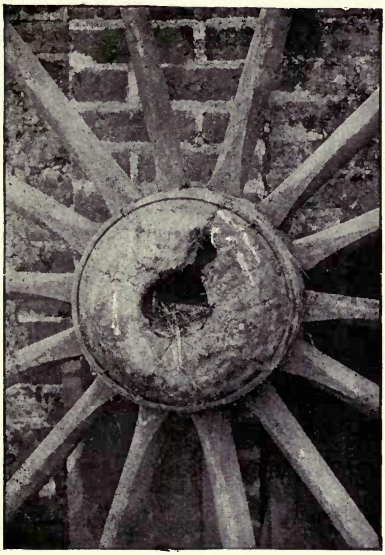
Indeed, the same paragraph will often come from different quarters at the same time.

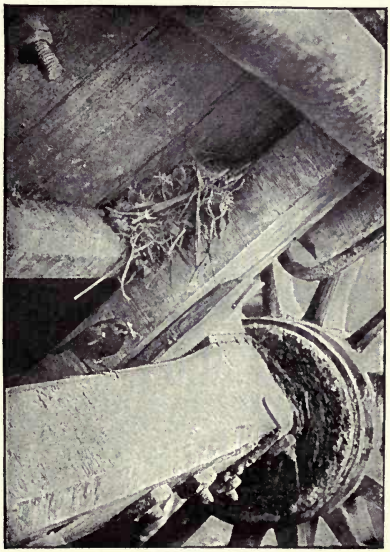
We have ourselves met with a Robin's nest in an old coffee-pot tossed by some careless hand into a garden hedge, in an old watering-can lying upon its side on a rubbish heap, in the hub of a cart-wheel leaning against a wall, and amongst the woodwork beneath a tumbril standing in a shed, and give herewith a combination page of photographs of them as objects of curiosity. It is gratifying to be able to state that in each case the parent birds succeeded in rearing and carrying off their young ones in safety. Strangely enough, a Pied Wagtail had also built her nest in the framework of the tumbril above mentioned, on the same side as the Robin, but below the axletree. Both birds had taken advantage of an extra piece of timber which had been nailed on to strengthen the framework of the vehicle.

We have seen the nests of various members of the Tit family inside letter-boxes, street lamps, disused pumps, and even within the narrow limits afforded by the interior of the knife-box of a mowing machine.

A gentleman, who was going abroad big game shooting some years ago, like a prudent sportsman, tested the capabilities of his elephant gun and its explosive bullets on a brick garden wall prior to starting. The following spring a Spotted Flycatcher discovered that the penetrative force and destructive powers of one of the little projectiles had been sufficient to create an eligible site for a small bird's nest, and promptly built her own in the hole made by it.

The unwearying patience and devotion of birds whilst engaged in sitting upon their eggs or tending





ROBINS' NESTS IN ODD SITUATIONS.

their young has often struck me as being really wonderful. I have passed some several times a day for days together, and found them sitting on every occasion in exactly the same positions. However, such is by no means always the case, as birds nesting in fairly open situations frequently alter their positions—a fact due, no doubt, in many cases

FLYCATCHER'S NEST IN BULLET-HOLE.

to the shifting of the wind, as they dislike to sit with their tails to it.

The presence of sitting game birds may always be known by the increased size of their droppings around places where they go to drink. I have known a Red Grouse sit so long and closely on a clutch of addled eggs that she became almost too weak to fly.

Some birds may be caught on their nests even when in quite open situations, and handled without being made to forsake. Last spring my brother and I met with a very curious case of a

Chaffinch which did not object to being caught on her nest by a boy, yet would not allow us to photograph her. We tried morning, noon, and night in vain. I have known a bird of this species have every feather in her tail pulled out, whilst sitting on her eggs, by a mischievous lad who tried to catch her, and yet bring off her young.

TREE CREEPER.

Her nest was so insecurely affixed against the trunk of a huge tree that it began to topple over directly she commenced to sit, and would undoubtedly have fallen had not my brother fastened it up by driving a pin or two through its side into the bark of the tree.

I remember a case of a Tree Creeper being caught on her nest, situated behind a piece of loose bark hanging to the trunk of a lightning-struck elm, and conveyed half a mile in a man's jacket pocket in order that she might be shown to a little sick boy who took an intelligent interest in birds. Upon being returned, she resumed her duties towards her young as if nothing whatever had happened. We afterwards photographed one of her young ones as it left the nest and began to climb up the bark of the tree in which it had been bred.

Bullfinches sit very closely, as may be judged from the vignette on the opposite page, which has been made direct from the original photograph. Gray Wagtails are also faithful birds in this respect. In the beginning of June, 1895, I found the nest of one of these birds in a little ghyll in Westmorland, and an illustration of it appeared in my work on "British Birds' Nests." At the end of the same month of the present year we revisited the place, and found the old nest of 1895 still intact, one which had been used in 1896 a yard or two higher up the stream, and a new one, upon which the bird was then sitting, a few feet higher still. The nest was too far back in a dark horizontal fissure in the limestone rock to allow us to photograph the bird on it, so we put her off, and, drawing it a few inches out, went away. As she did not appear to resent our interference with her nest, we pulled it a bit further out still the next day, and on the third reflected sufficient light upon her by the aid of a looking-glass to enable the accompanying picture to be made. This done, we put it back in its original position, and the Wagtail ultimately hatched her eggs and reared five young ones.

Early in the morning of the day on which the Queen celebrated her Diamond Jubilee we started out to photograph a Red-backed Shrike sitting on her nest. She was much shyer than we anticipated, but after a patient wait of four and a half hours we succeeded in making the study on p. 203 by hiding the camera and photographer, and signalling to the latter by a low whistle when the bird was seen, with a field-glass, to go to her nest. It is of interest to us from the fact that the photograph was taken just as her Majesty left Buckingham Palace on her historic procession.

BULLFINCH ON NEST.

GRAY WAGTAIL ON NEST.

The male birds of many species feed their mates whilst they are engaged in brooding. I remember hiding up one evening with a Yorkshire gamekeeper in a small wood for a cock Sparrow-hawk which he said would be sure to come and feed the hen sitting on her nest close by. We located ourselves amongst some stunted birch trees in a place well above the nest, and commanding a good view of nearly every winged approach to it, and waited. In a while a very curious looking object came sailing down the ghyll just above the tree tops; there was a loud bang, and it literally came apart, one half falling obliquely with a thud to the ground, and the other disappearing, as if by magic, round the shoulder of a small hill. I picked up the portion which we had seen fall, and it proved to be a young Peewit plucked almost bare, and still warm. The sound of the keeper's unsuccessful shot put the hen off her nest. We waited until she returned, however, to receive what my companion considered a fatal wound, but, although badly hurt, the bird was actually sitting upon her nest next day, and when killed the devoted creature had dried blood running the full length of her tail and wing quills.

Cock Robins feed the hens assiduously whilst they are sitting, and in return for their care receive a low twitter of thanks.

Most people are aware of the fact that in nearly all clutches of House and Tree Sparrows' eggs one differs widely from the rest in regard to the character of its markings.

Last spring I succeeded in finding and identifying by the black patch on the chin and throat of the female a nest belonging to the latter species. It was situated in a hole in a pollard willow, and when

CLUTCH OF TREE SPARROW'S EGGS.

SHRIKE ON NEST.

I first discovered it contained only one egg—the one with the large blotches upon it in the illustration of a clutch of Tree Sparrow's eggs on the preceding page. I visited the nest again exactly a week later, and was surprised to find that it had six more eggs in it, all very similar to each other, but differing widely from the first one laid. My observations proved that in this case, at any rate, the egg, unlike the rest of those in the clutch in the character of its markings, was laid first, and that the species can upon occasion lay at least one more egg than it has been given credit for even by our greatest authorities on British ornithology, who place the outside limit of a clutch of Tree Sparrow's eggs at six in number.

It is surprising how much is expected of a man who takes an interest in birds and their eggs by people who know little or nothing of the subject themselves. They will ask him to identify all sorts of eggs with certainty without a scrap of evidence on their part saving the empty shell, and even go so far as to paint white eggs with all kinds of colours. A wag once sent me a small domestic fowl's egg, very cleverly marked with by no means unreasonable colours, and a request that I should identify it for him. I promptly replied that it was a common Humbug's egg from Bamboozle-'em-land.

Although birds' eggs, as a rule, follow pretty closely the common type of their species in regard to coloration and markings, extraordinary departures are sometimes met with, and I believe that such variations are generally due to the indifferent health of their layers. I have once or twice met with common Wrens' eggs without markings of any sort, and some years ago took a clutch of pure white eggs from a House Sparrow's nest. I have

also seen a Chaffinch's nest containing five pale greenish-blue unmarked eggs. I found a Blackbird's nest in the spring of 1896 containing four small greenish-grey unspotted eggs, the shells of which were rough and granulated.

Some birds lay their eggs straight off, one

COAL TIT.

every day, and then commence to sit, whilst others, probably influenced by the character of the weather, lay irregularly, missing a day or two as they proceed. I have endeavoured to make a series of systematic observations on this point, but accidents and lack of time to carry them out properly have rendered my figures unworthy of tabulation.

What puzzles me in regard to some birds is that they build in such cramped situations and lay so

many eggs that they cannot possibly cover them all except two deep, and yet those in the bottom layer receive a sufficient amount of heat to incubate them. I have seen Coal Tits' eggs disposed in this way, and the bottom row had each worked themselves such deep indentations in the materials with which the nest was composed as to be half buried. I have also seen a Moor hen's nest with nine eggs in it, some of which were piled upon the others. Of course, it may be said that a sitting bird turns her eggs over daily, but even then one would think that the variable amount of heat generated around them must be detrimental to the embryo chick. In the case of the Coal Tit just mentioned, I very much question whether they were turned over at all, because such an action would have prevented the great amount of embedment of the eggs in the materials of which the bottom of the nest was formed.

Members of the Plover family greatly dislike their eggs to lie any way except with their points to the centre of the nest, and, when a boy, I used to alter the disposition of the eggs of Peewits and Golden Plovers in order to see how quickly they would set them to rights again.

According to my experience, birds are not nearly so particular about their nests and eggs as is popularly supposed. I recollect once examining a Dipper's nest, situated in a horizontal cleft of rock, and containing four eggs, which were centred round a sharp piece of stone projecting right through its bottom. I have also seen a Chaffinch's nest with a piece of blackthorn showing through it, although it was quite finished and contained eggs.

Starlings frequently drop their eggs about in the fields. Pheasants, Partridges, Grouse, Eider Ducks,

Wrens, and Tits, there is every reason to believe, occasionally lay their eggs in the nests of other birds of their own species, and, in the case of the first-named two, I have found them mixed together in the same nest.

With a view to testing how far certain birds will tolerate the eggs of others of a different species in their nests, I commenced a series of experiments last spring in the neighbourhood of Elstree. I discovered that a Thrush will take no notice whatever of the introduction of a Blackbird's egg to her nest, and that the latter bird is equally indifferent to an exchange with her lighter-coloured neighbour. I intended to endeavour to carry out the exchange to entire clutches, but, unfortunately, my experiments were all ruined by Carrion Crows and mischievous boys, of which we can boast a goodly number in our particular corner of Hertfordshire.

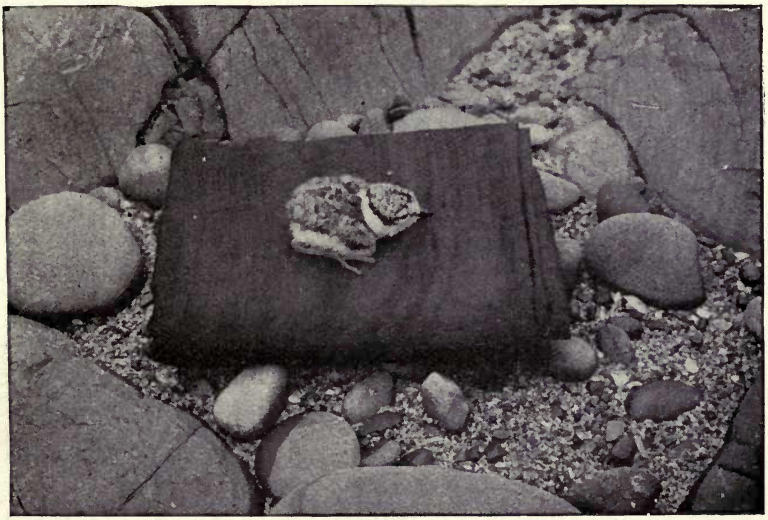
As some indication of the great struggle for existence going on amongst birds, I have, from close observation and a pretty extensive experience, little hesitation in saying that I do not believe that one-third of the eggs laid by British wild birds, preserved and otherwise, ever produce in any single season chicks which have the good fortune to grow to adults. Egg collectors, schoolboys, and savage destroyers who despoil for the mere love of annihilating the beautiful; table and manufacturing requirements; bird-catchers who take clutches of young song-birds; Eagles, Falcons, Hawks, Owls, Ravens, Crows, Rooks, Magpies, Jays, and Gulls; foxes, dogs, cats, rats, stoats, weasels, and snakes; bad weather and accidents—all claim a tithe either of sitting hens, eggs, or young birds.

Some birds' eggs and young have to trust for protection entirely to their close harmonisation with

surrounding objects, and this they often do with the most remarkable success. I remember a case of a dozen people wandering all over quite a small patch of sand and shingle in search of sea-shells, and yet missing a Ringed Plover's eggs, which, by a miracle, also escaped the much more likely calamity of being trodden upon. I visited the place a few days afterwards, when the young birds had been hatched, and, although I made a systematic search for them, three in number, I failed entirely to discover a single bird. I accordingly retired to a roofless shed sixty yards distant, and well above the little spit of sand and shingle, which I kept under close observation through my field-glasses. In about ten minutes the female ran down from a ridge of rocks, and standing head to wind began to call in sweet low notes. Presently a little grey tuft of down ran swiftly up to her, and disappeared beneath her right wing, and was instantly followed by another which came from an opposite direction, and sought cover by ducking its head and going beneath her puffed out breast feathers. A third darted up, but did not immediately take shelter, although his mother continued to call for him. He dallied for a while in examination of a small pool of water, which was thickly coated with bright green weed and slime, and after picking up, or pretending to do so, one or two morsels of food in the most business-like fashion, retired beneath his mother's sheltering wing, and she ceased to call.

After a while I dashed down upon them at my utmost speed. The old bird ran straight away for fifteen yards or so, and then began to tumble about and practise her decoying antics. The young ones took their departure each in an opposite direction, and by the time I reached the spot

YOUNG RINGED PLOVER ON SHINGLE.

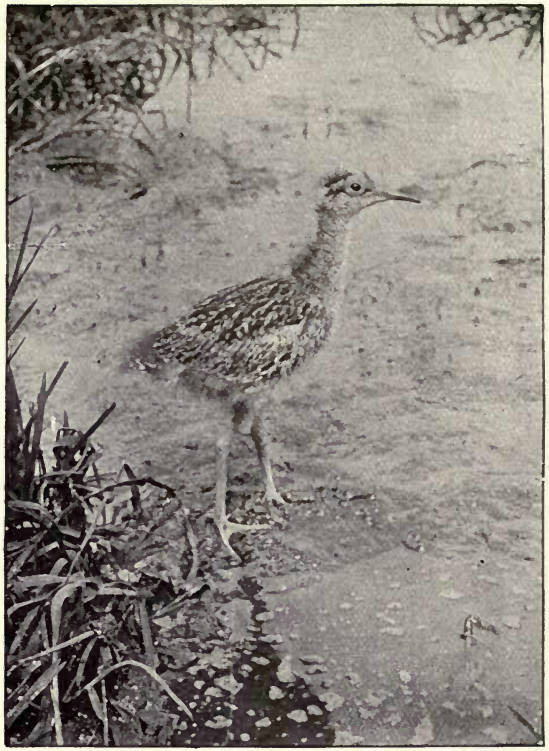


YOUNG RINGED PLOVER ON BLACK CLOTH.

there was not the slightest sign of one of them. Eventually, however, I discovered all three, and upon measuring, found that the one which had travelled farthest away from the place where its mother crouched had run six yards before clapping down to hide. In order to show the wonderful way in which these little creatures harmonise with their surroundings, and thus escape detection, I got my brother to photograph one of them exactly where it crouched, and then folding a black focussing cloth up I placed it beneath the chick, and had another study made. By this means, I think, we have succeeded in illustrating with some degree of clearness the value of protective coloration, so far as the limitations of black and white will allow.

Young Curlews, Golden Plovers, Peewits, and Sandpipers, all run about directly they leave the shell; indeed, sometimes actually before they have accomplished their deliverance. I have on more than one occasion seen a baby Peewit wandering about with half of its prison house still attached to its downy rump; and if a hawk or other bird of prey should happen to appear overhead, they instinctively clap flat upon the ground, and remain motionless as stones until the danger has passed. In order to illustrate the benefits of keeping absolutely still and trusting for safety to the protective coloration of its upper parts, I sought systematically for a young Curlew last summer on the Westmorland hills, and when I found it half hidden in a tuft of withered grass, I got my brother to make a photograph of it exactly where it lay, and then another of the long-legged creature standing on the muddy shores of a half-silted-up cattle pond. As soon as the second picture had been taken, the bird deliberately walked into the

YOUNG CURLEW CROUCHING.



YOUNG CURLEW STANDING UP.

water, swam straight across, and upon regaining the opposite bank, ran away swiftly up a steep hillside.

I have often been astonished at the great distance at which Curlews can be heard calling, but never had any notion of the immense power of their vocal organs until the day I caught the one figured overleaf. I was sitting beneath a stone wall with the bird on my lap waiting until my brother recharged some photographic slides, when its mother flew close overhead, uttering her familiar call-note, which her offspring instantly answered in a loud, harsh, ear-splitting cry of the most unmusical character I have ever heard.

Young Peewits have a peculiar habit when caught and released of stooping gracefully every few yards they run away, and making what appears to be a very pretty curtsey in return for their deliverance. Similar antics are practised by adult birds of this species pretending, when under observation, of which they are conscious, to pick up bits of food where there is every reason for believing none really exists.

I know of no prettier sight than that afforded by watching at close quarters a pair of shy birds feeding their young without the slightest suspicion of being under observation. They do their work then with an easy deliberation and linger over the nest and its precious contents with a thousand signs of parental pride and deep natural affection.

On Good Friday, 1897, I found a Blackbird's nest, containing three young ones, situated in a very thin open hedgerow running parallel with the outer wall of an old wooden cart-shed some four feet away. I marked a place directly opposite and on a level with it, and going inside the structure, cut a circular

hole with my pocket-knife in one of the boards for the admission of the lens of my brother's camera, and a smaller one a few inches above it for purposes of observation.

When we had got everything ready to take a

YOUNG PEEWIT.

photograph, we had not long to wait before the female turned up with her bill full of medium-sized worms. She alighted on a branch about a yard away from the nest, and after listening intently for a few seconds with her head cocked on one side, hopped up. She had no sooner arrived on the edge of her nest than each downy little head popped up with the suddenness of a jack in the box, and each richly coloured mouth opened to its

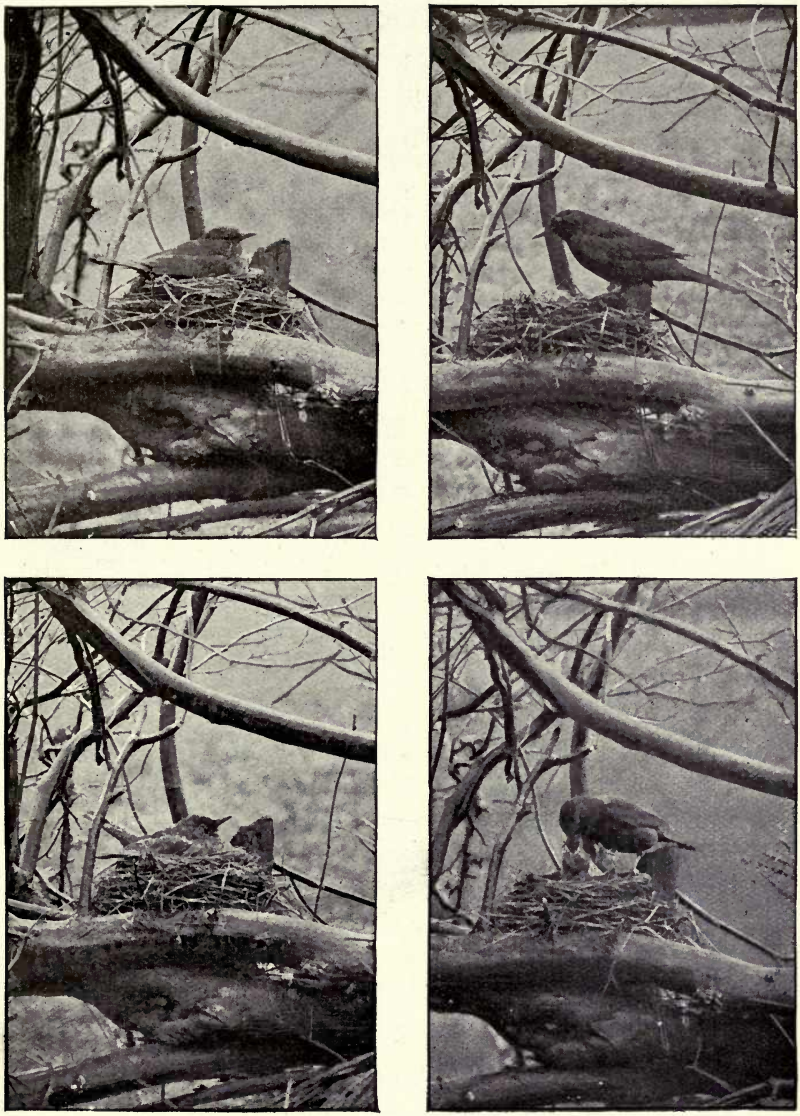
uttermost extent to receive an equal share of the food the parent bird had brought.

Directly this was consumed they all subsided, and the old bird attended to the sanitary arrangements of her household, and then flew away in search of more food.

Presently the cock came along with a large worm which he had carefully chopped into several pieces ready for impartial distribution amongst his promising offspring. He, too, seemed to regard cleanliness with a scrupulous eye, and after doing his share of the necessary work, he retired to a neighbouring elm tree and piped a few mellow notes.

When the hen returned again a heavy shower of rain was falling, and after she had distributed her harvest of worms she hopped into the nest, and hustling about a while with gentle care for the chicks beneath her, settled down with her wings spread over the sides of her nest to allow the rain drops to run off, and the happiest look of security and contentment about her I ever saw in any bird in my life. Her head, back, wings, and tail were covered with great crystal beads of water, which rolled down and away like quicksilver in obedience to the laws of gravitation directly they received the weight of an additional drop of rain. We managed, in spite of a very poor light, to make a photograph of her in this condition, as shown in the bottom left-hand corner of the combination page of illustrations.

When the shower was over the cock came along with a fresh supply of food, and the hen immediately hopped off and stood on the edge of the nest and watched him feed the young ones. It was a sweetly pretty picture, and my brother has



BLACKBIRDS AT HOME.

regretted ever since the unfortunate circumstance that he was changing his slides at the moment. He waited nearly the whole of Easter Sunday and Monday for a similar scene, but it never presented itself. The hen fed the young birds twice for the cock once. Indeed, the latter often came to gaze in admiration at his chicks, and showed every signs of the fond pride of an affectionate father.

I believe I am in a position to boast what very few ornithologists can. I have helped birds to build their nests, hatch their eggs, and feed their young. When a boy I used to collect feathers and amuse myself by dropping them from the top of a bridge and watching the Swallows and Martins catch and carry them away for use in lining their nests. I have kept birds' eggs warm in my hands during the enforced absence of the sitting hen, and have placed suitable food beside birds' nests and watched them pick it up and give it to their young ones.

Even where a great amount of hard work is entailed in feeding a hungry brood of young ones, some female birds do not receive any assistance from the males. At the end of last May I found a Chiffchaff's nest, containing five young ones, at the foot of a tiny thorn bush growing in an old copse near my home. I kept it under close observation a whole day, and made quite sure that the male bird did not render the slightest assistance, although the female worked almost incessantly from morning till night. I was able to identify her with certainty from the fact that one of her under tail coverts had by some accident become bent upwards, and projected between the quills on the upper side of her tail. I timed her upon my watch on several occasions, both during the forenoon and afternoon,

CHIFFCHAFF FEEDING HER YOUNG.

and found that upon an average she brought caterpillars and flies four times in five minutes, and on the occasion of each visit spent from ten to fifteen seconds in attending to the sanitary arrangements of her little establishment. Most birds are very

NIGHTINGALE ON NEST.

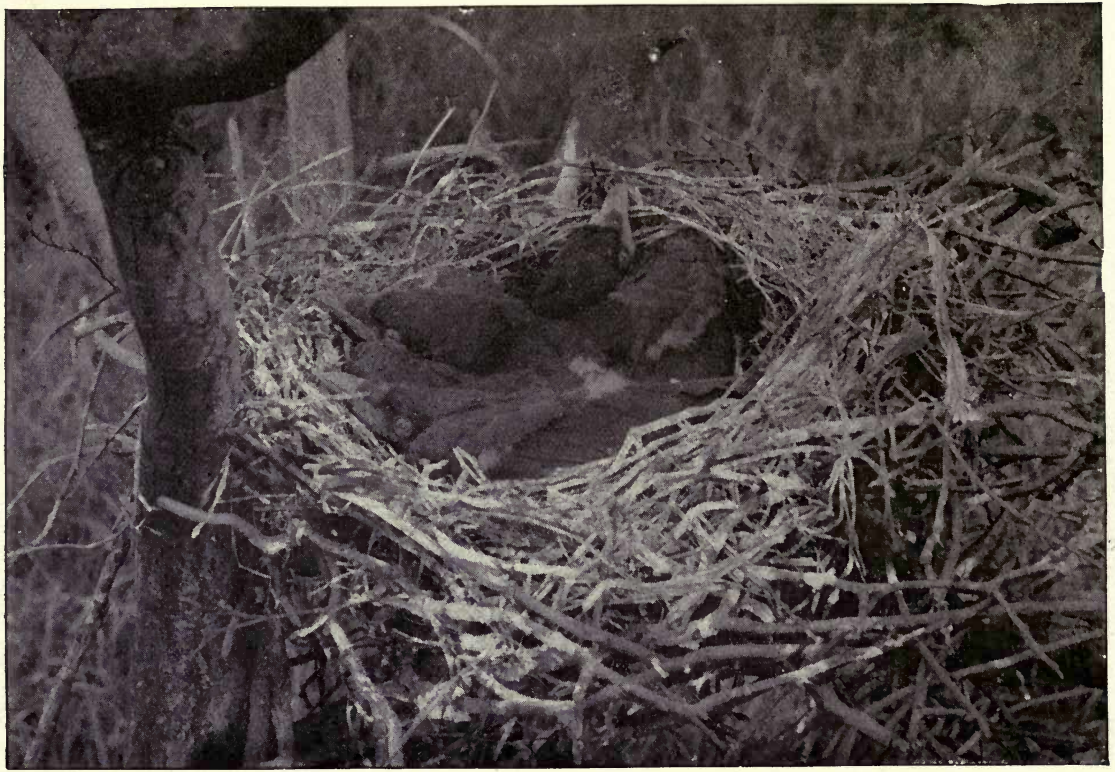
particular about this part of their duties, and I have known a Robin refuse to fetch grubs to her young ones until she had been allowed an opportunity of cleansing the edge of her nest. Contrary to popular notions, this is a perfectly cleanly operation, as each piece of excrement voided by a young bird is enveloped in a thin gelatinous sack, sufficiently

WHITETHROAT ON NEST.

consistent to allow the parent bird to remove the whole without the slightest fear of contamination.

Whilst the female Chiffchaff was hard at work, the male kept on wearisomely reiterating his note first from one branch and then from another overhead. I caught several small, light green caterpillars and troublesome flies, and placing them on the edge of the nest, knelt down, and waited within five feet of it. By remaining perfectly still until she had flown backwards and forwards past me several times, I established myself in her confidence, and she went to her nest and fed her young ones. As soon as she had disposed of the supply of food which she had brought herself, she picked up mine and distributed it as far as it would go amongst her more than half-grown sons and daughters. I repeated the assistance again and again, and it appeared on each occasion to be appreciated. Once only during the afternoon did the industrious little creature take a rest for about half an hour. My brother made a study of her in front of her nest, but owing to the peculiar conformation of the ground and the extreme quickness of the bird's movements, the result does not show everything as plainly as we could have desired.

Close by we discovered a Marsh Tit's nest, containing a huddling crowd of almost fully-feathered fledgelings, situated in a hole in the trunk of a tree, and not more than four feet from the ground. The male and female were both hard at work feeding their young ones. They always went away for food together and returned in each other's company with a harvest of small, light green caterpillars. If they became separated for a moment, they called to one another in notes which could be heard at a surprising distance. When near the



YOUNG CARRION CROWS IN NEST.

nest and waiting to enter it, they let their wings droop low by their sides, and shook them in the tremulous manner so common to young birds of many species when being fed after they have left the nest. I have noticed the same habit in other members of the Tit family.

YOUNG SPOTTED FLYCATCHERS.

Although within a comparatively short distance of London, I found the following birds' nests all within fifty yards of each other, and containing eggs or young in this little copse: Carrion Crow, Red-backed Shrike, Nightingale, Whitethroat, Blackbird, Marsh Tit, Tree Sparrow, Common Wren, and Chiffchaff.

During the part of our holidays which we spent in Westmorland in the summer of 1897, my brother

discovered a Blue Tit's nest in a hollow birch tree; and whilst he was trying to photograph the old

YOUNG WOOD WRENS.

birds going in and out of the hole leading to it, I found a Spotted Flycatcher's nest not fifteen yards away in one direction, and a Wood Wren's less

YOUNG BLUE TIT.

than ten in another. A curious circumstance was that they all three contained young ones, which upon being disturbed instantly took flight.

On examining the last-named bird's nest I was surprised to find it swarming with ants, which

were running about everywhere amongst the fine grass and horsehair with which it was lined. They must have been there before the young birds took their departure upon my looking into their little domed cradle, and how their disturbing presence could have been tolerated I cannot make out.

The Flycatcher seldom went further than a dead branch projecting from a tall ash tree growing close by her nest for food, which she seemed to allow to come to her and then snatch by a short fluttering excursion into the air. I timed her visits to her nest with food on several occasions during the day, and she never exceeded two in five minutes. I do not think that she received any assistance whatever from her male companion, as I never saw him near the nest. On the other hand the cock Blue Tit helped the hen with a will, and they invariably came back from a raid on caterpillars together. About noon a bird entered the nesting hole twice in four minutes, but by six o'clock in the evening the rate of feeding had increased to six times in five minutes, that is, of course in each case counting the combined efforts of the parent birds.

Whilst in the heart of Essex during the Whitsun holidays of 1897 we were shown a Jay's nest, situated in a young birch tree growing in a thick dark wood. In spite of a necessarily poor light, swarms of gnats, and the shyness of a very cunning bird, my brother determined to try to make a photograph of her in the act of feeding her young, so we set to work and built a thick bower of branches, with just a small peep-hole for the lens of his camera, near the top of the side commanding a view of the nest, and another some distance below it for purposes of observation.

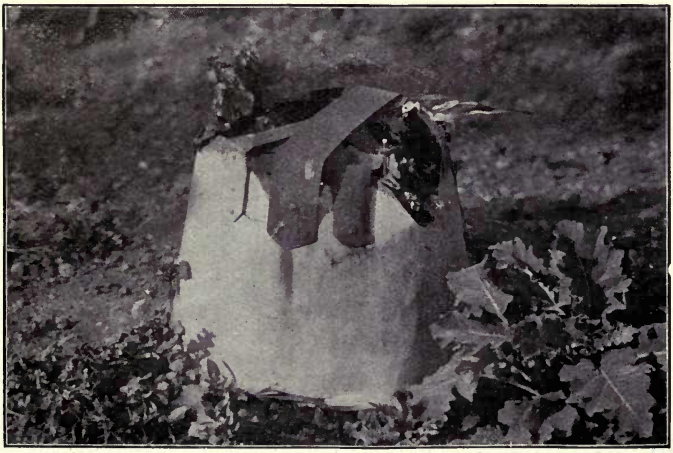
JAY AND YOUNG.

After about half an hour's waiting the old bird came back, and hopping about suspiciously from branch to branch and tree to tree for a while, and spending her time between listening and uttering her harsh unmusical alarm note, she alighted on the ground and made a very leisurely survey of the bower in which the photographer knelt, almost afraid to breathe. He could hear her hopping right round because of the noise made by her feet upon the carpet of dead leaves which was spread everywhere.

It was quite an hour before she ventured to visit her nest, and when she did there was no sign of food in her bill. Her five young ones instantly shot up their heads and opened their abnormally wide mouths upon her approach, and she pushed her bill right into their throats and fed them by regurgitation, just like a pigeon. Each nestling was fed in turn before the old bird took her departure. We spent a whole day at the place, and suffered the most terrible tortures from the gnats which simply swarmed and filled our little bower with their diabolical music. When the Jay was away for food we killed them until our hands and faces were thickly besmeared with their remains, but the destruction of one seemed only to invite the spiteful vengeance of a dozen others. Still my brother would not give in, and when the bird approached her nest he set his teeth, and shivered under the exquisite punishment rather than make the slightest movement which the sharp-eyed creature would be likely to detect. Several times she either saw something that frightened her, or fancied she did so, for she set up a loud terrified squawking, and suddenly took her departure when she was within a yard of her nest.

So ill-conditioned was the place for taking

PIED WAGTAIL'S NEST AND YOUNG IN OLD PAIL.



PIED WAGTAIL GOING INTO INVERTED OLD PAIL TO FEED HER YOUNG.

even a decent photograph of a thing so full of life and movement as a bird, and so anxious was my brother not to miss a favourable gleam of light through the surrounding tree tops during the presence of the Jay at her nest, that in spite of the gnats he would not leave his post, and I had to go in search of some lunch for him. He succeeded in making a series of studies, a reproduction of one of which is given on p. 225. It is the most dearly bought picture in this book, for in addition to the torture endured in procuring it, my brother was unable to sleep the two following nights from the recurrent irritation in his hands and face, which swelled to such an alarming extent that he was only able to look out of two little holes in the latter, and was quite unable to close the fingers of the former. Our family doctor pronounced his case to be a bad attack of blood poisoning, but was unable to ascribe it entirely to the stings of the insects.

We found two other Jays' nests near the same place, containing eggs, and in an open part of the wood fell in with a male Moorhen, which had by a remarkable accident so entangled himself amongst some dead branches carelessly thrown into a pond as to be quite unable to move until we released him, when he flew away in a great hurry.

Pied Wagtails sometimes have a fancy for odd situations in which to build their nests. Last spring a friend of ours discovered one inside an old pail, which was lying upside down in a corner of his garden. It contained young ones, and the parent birds, which both assisted in feeding them, entered and left through a hole in the bottom of the disused vessel. My brother succeeded in taking a photograph of one of them in the act of entering with

a supply of food, and afterwards made a study of the nest and young ones with the pail turned over on its side. The foreshortening of its interior and the holes through its bottom give it a somewhat peculiar appearance in the picture.

It would be interesting to know how long a time elapses between fledgelings leaving the nest and

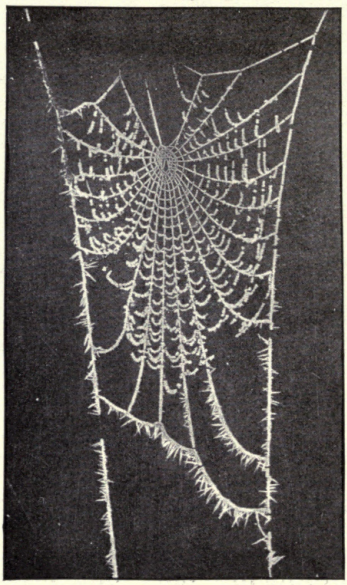
YOUNG THRUSHES.

being abandoned to their own resources by their parents. I am inclined to think that, whilst in the case of birds producing only one brood in a season they stick together for months, in that of those producing two or three they are left to take care of themselves in a few days.

Pretty sights of Thrushes, Robins, Shrikes, and other birds feeding their young ones may often be seen during a ramble by wood and hedgerow. The above picture of a pair of young Thrushes

waiting to be fed was photographed just as their mother arrived with a worm and called to them from an adjoining oak tree. The bird on the left was looking up at her at the moment the plate was exposed.

Sometimes a male bird will rear a brood of young ones by himself after an accident has deprived him of the help of his companion. I remember the case of a Red-backed Shrike accomplishing this feat last summer in an old orchard close to my home.



SPIDER'S WEB COVERED WITH HOAR FROST.

CHAPTER VI.

WHERE BIRDS SLEEP.

WHEN I was a boy, nothing connected with the life of birds puzzled me so greatly as the question of where they slept. I often tried to watch them to roost, but with little success. That birds sleep very lightly, and are easily awakened, is a fact I have proved over and over again by casting a small pebble in the air in such a way that it would fall vertically into a large evergreen where I knew a number of House Sparrows were roosting. Although the stone made very little more noise in its descent through the leaves than a big rain-drop would have done, it instantly sent several birds out in a great flutter of alarm. I have also noticed how exceedingly difficult it is to approach Golden or Green Plovers at night-time, especially on peaty soil, which easily transmits the slightest vibrations, and thus, I am persuaded, assists to a very considerable extent in awakening sleeping birds.

To many people it is a profound puzzle how a slumbering bird retains its balance on a slender twig or branch that is liable to be swayed more or less violently to and fro by a strong breeze. The answer is very simple. Birds only roost on such branches as they can grip firmly with their toes and claws, and in sitting down upon them the bending of the knee joints so contracts the muscles

of the toes as practically to lock the bird to its perch. In fact, a bird cannot leave its roost until it has straightened its legs, and thereby relaxed the muscles of its toes.

I have conducted a series of experiments on this subject by watching Thrushes, Sparrows, and Robins go to sleep on wire perches too fine and smooth for them to grasp properly. They could retain their balance with ease whilst conscious, but directly they went to sleep they lost their equilibrium, and slipping backwards or forwards awoke with a start and either re-established themselves or fluttered to the ground. A Rook can perch upon a telegraph wire, but he could not go to sleep on it, because it is not thick enough for him to grasp with sufficient unconscious firmness.

Another question which I have often heard asked is—How a frail little bird keeps itself warm during an intensely cold winter's night in an open hedge or wind-swept shrub? The answer is, that when it tucks its head under its shoulder plumage and goes to sleep, it puffs its feathers out until they almost stand at right angles to its body. This ingenious method of disposing them entangles the air amongst the down growing round the base of each shaft, and, as air is a bad conductor of heat, this helps to prevent an undue escape of warmth from the little creature's body.

It is an exceedingly difficult matter to examine wild birds in this condition, as the instant they awake their feathers assume their normal position; however, I have succeeded in taking a leisurely look at a few, including a Common Wren, which looked for all the world like a tiny ball of feathers as it sat on the outside edge of a large hole made by Sparrows in the thatch of an old cart-shed.

I do not think for a moment that birds die from cold, even in the severest of winters, if their food supply does not fail them. After the terribly hard weather experienced during the first months of 1895 I had a Rook shown to me hanging by its claws in a tree, where it was supposed to have been frozen to death; but I knew of a number of well-

THRUSH ON SLEEPING-PERCH.
(*Photographed by Magnesium Flashlight.*)

fed Sparrows that slept in an equally, if not more exposed, situation all through the winter, without taking the slightest harm, also several barn-door fowls that roosted every night in an old apple-tree in perfect safety, with the exception of the chanticleer, which had some of the serrations of a somewhat large single comb frostbitten. Further, I never yet met with a Blackbird, Thrush, or Redwing dead in such a situation as to warrant me in supposing that it had been frozen to death whilst asleep, although I have found lots of

skeletons in Puffin burrows and Rabbit holes, whither they had crept to die.

Birds that sleep in trees and shrubs always do so with their heads to the wind during a breezy night; and such as patronise holes in thatches and the sides of ricks shun those infested with rats or mice.

Blackbirds roost in evergreens and thick hedgerows, and when disturbed invariably flutter out without uttering a sound of any kind, but nearly always pipe their familiar alarm note upon re-alighting. On the night of June 22nd, 1897, I was in the neighbourhood of Barnet Gate, where there was a particularly large Jubilee bonfire and display of pyrotechnics, and I heard several Carrion Crows and Blackbirds, which had been disturbed by the flare and din, cry out in winging their way from the vicinity.

Thrushes sleep in similar situations to Blackbirds, but are a trifle more partial to evergreens, and when disturbed they often make a peculiar snapping noise with their bills. The picture on p. 233 represents a Thrush at roost in a hedgerow. It was photographed by a magnesium flash at nine o'clock at night in January, 1896, and is, so far as we know, the first photographic study of a wild bird on its natural roost ever made.

Open hedges and bramble bushes are patronised by Yellow Hammers, which may always be known by their alarm note—*trit trit trit*—when disturbed. Chaffinches sleep in hedgerows, but we have met with surprisingly few at night-time, even in districts where they were particularly numerous by day, although we have sought carefully and long.

We have found Robins and Hedge Sparrows roosting in laurel bushes, boxwood trees, and ever-

greens of other kinds, and have been surprised to meet with them close to the ground, sometimes on a windy night.

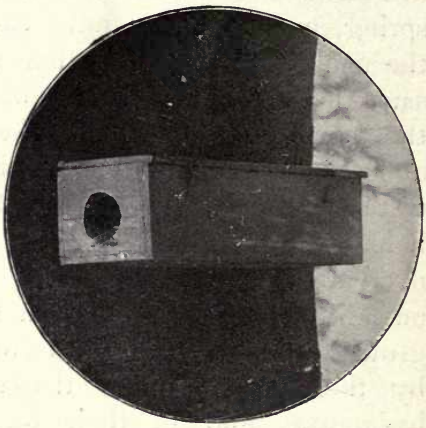
Ivy growing against houses, rocks, and round trees, Scotch firs in large woods, and the reed-beds of marshlands, are all beloved of Starlings for roosting in. I have met with them in high old thorn hedges in summer-time, and remember once hearing a flock chirruping and whistling in a clump of ash trees at eleven o'clock at night during the month of August just as gaily as if it had been the same hour in the morning.

That some birds sleep in their old nests in winter-time, and others utilise those made by a different species, we have proved beyond a doubt during our nocturnal investigations. House Sparrows constantly sleep in their old nests, and foul them terribly during the time they are used as bed-chambers. When they have paired in the early spring, and before family cares have commenced, the male and female often roost together in the same hole. They are the most sagacious birds in the world, and can adapt themselves with ease to almost any combination of circumstances. I have watched them go to roost behind sign-boards, in holes under roofs, and in walls, in evergreens overhanging much-frequented thoroughfares on the outskirts of London, holes in hayricks, amongst ivy growing against walls and round trees, holes made by themselves in old thatched roofs, bare field hedgerows, and in their own nests. They sleep during the winter months in a number of boxes fixed by a lady in our neighbourhood to the trees in her grounds, for the Tits to breed in. Most naturalists have observed the habit House Sparrows have of picking up straws and feathers in the

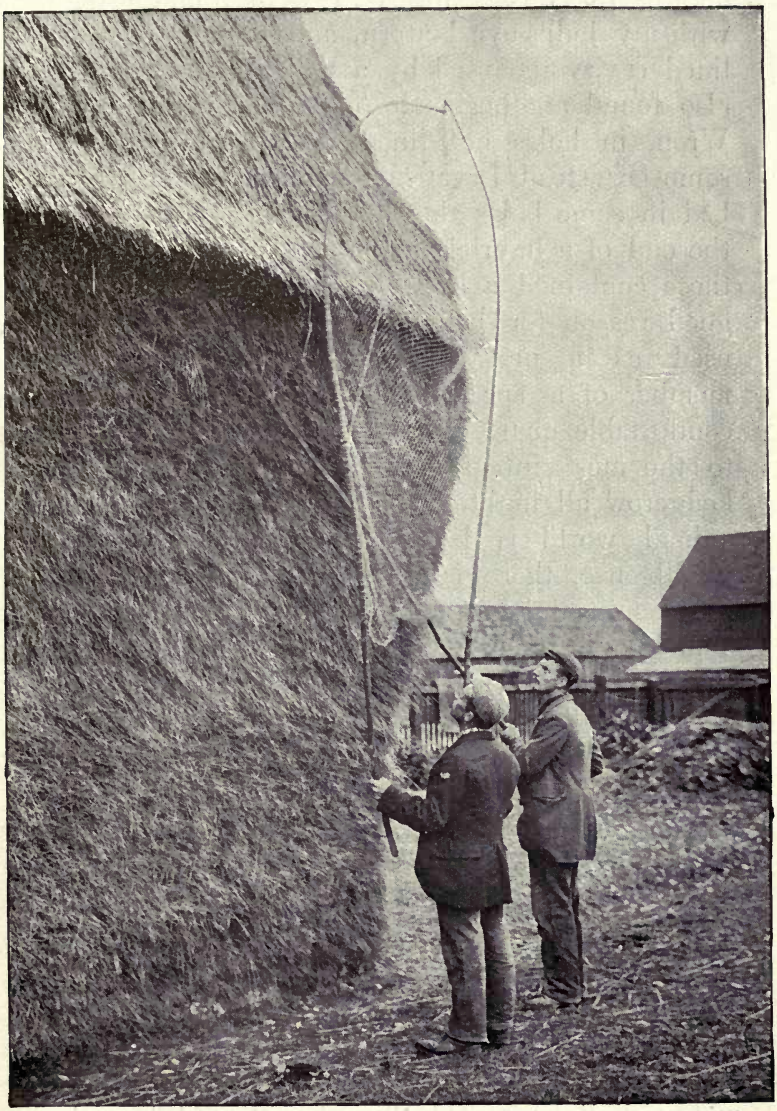
autumn, and flying off with them as if on nest-building intent, and concluded that the birds were repairing their old nests, a habit well known of Rooks. I think I can claim to have made an interesting discovery in regard to this matter, viz. that Sparrows so engaged are preparing for themselves warm winter quarters or a means of more effectual hiding.

COCK SPARROW.

During March, 1897, I examined the eaves of a thatch covering a cart-shed, the side walls of which were about five feet in height. The Sparrows had cut holes from six to twelve inches deep in the roof, starting under the eaves and following the upward trend of the straws, and in three separate instances these holes were lined with feathers and had a collection of droppings on their outer edges. The presence of the feathers puzzled me considerably, for I was certain that the species never bred in the thatch on account of its very easily accessible position and the fact that I had examined



NESTING-BOX.



SPARROW CATCHERS.

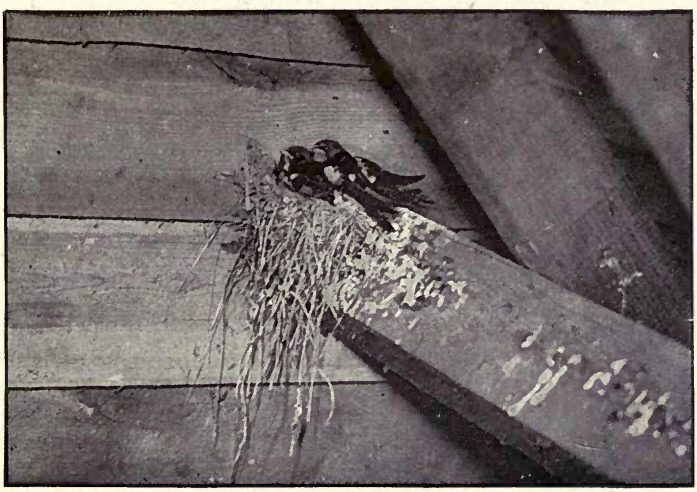
it regularly for years during the spring and summer months for Wrens' nests. I went round after dark with my bull's-eye lantern, and found each feather-lined cavity tenanted by a male House Sparrow. I also found another male and two females, and a Wren, in holes not lined with anything. On the same farmstead I watched a number of Sparrows to bed in some holes they had made for themselves in the end of a hayrick, and upon investigation, one of these contained a lining of feathers, although I had good reason for believing that it had never been used as a nest. It seems strange that one member of a species should make for itself such comfortable quarters, whilst another is so indifferent to the most intense cold as to sit in a leafless hedgerow all night. The fact is, that, although the animal world is largely governed by hereditary intelligence, there is really no such dead level of unreasoning instinct abroad as is popularly supposed. The lower animals differ as much from each other in the same species relatively as men and women; but these differences are often so subtle, and their habits in a wild state so little known, that they escape all but the very closest observers.

My investigations lead me to believe that the majority of male House Sparrows take to the open hedges and trees to roost in whilst their mates are brooding; however, a few of them are true to their old quarters in holes under eaves, thatch, and in ricks.

Tits roost under thatch, and in holes in the sides of ricks, and in one or two instances we have met with them in old Wrens' nests. I have heard it said that the male Long-tailed Tit sleeps in the nest with the female, but unfortunately I have been prevented from putting this assertion to the

test, on account of the fact that the nests I have had under observation have been cut out and taken away before the female had begun to sit.

That birds of different species will upon occasion roost together we have proved by taking a Sparrow and a Wren from the same hole in the end of a haystack at night-time.



FULLY-FLEDGED SWALLOWS SLEEPING IN OLD NEST.
(*Photographed by Magnesium Flashlight.*)

Swallows sleep on beams in barns where they breed, and when molested flutter from one place to another without making any serious attempt to leave the building.

We have examined sheds, however, in which were nests full of large young ones without meeting with a single old bird either on them or the surrounding timbers. I have watched them go to roost in Scotch firs and the branches of trees overhanging ponds; and their going to rest in flocks amongst the reeds growing on Thames eyots is

one of the sights of the river before the birds take their departure south.

Late last September I watched a brood of fully-fledged Swallows go to roost in their old nest, and my brother photographed them by flashlight from the top of a long ladder.

If left undisturbed, many birds will roost night after night in the same place, and often upon one particular branch. Last winter we tried several times to photograph a female blackbird in a hawthorn bush as she sat upon an old nest belonging to her species, but in vain: the branches and small twigs were too thick for us to accomplish the making of a picture.

Pheasants are sometimes very partial to a particular bough for roosting upon; and if any accident, such as the blowing down or felling of the tree to which it belongs, should deprive them of it, they wander round, showing signs of great concern over their loss.

Tree-perching birds occasionally live in places where they experience considerable difficulty in finding a natural roost. In the summer of 1895 my brother and I found ourselves stranded for a little while at Tarbert Harris in the Western Isles of Scotland, and whilst out for a stroll one evening heard a Cuckoo crying his name aloud upon a craggy hillside. I expressed some wonder as to where he slept in such a wilderness of rocks, and was told that he came regularly every night to roost amongst some shrubs growing in the minister's little garden.

Ravens sleep on ledges and jutting crags in precipices, and are remarkable for their acuteness of hearing. I knew an old gamekeeper in the North of England who used to hide during the

afternoon in a cave situated at the foot of a scaur frequented by these birds, and when it got fairly dark he took off his boots and crept stealthily along until he came to the part directly beneath where they usually roosted. In this way he secured one now and again by an overhead shot as the birds, which he alarmed by making an intentional noise, flew away outlined against the sky. His best efforts were, however, often frustrated by the accidental rattle of a stone beneath his feet, startling the Ravens from their slumbers long before he got within gunshot.

Wild Ducks, being night feeders, generally sleep between ten and eleven o'clock in the morning on a bank or in the water of some secluded pond, lake, or broad. It is said that the way a duck sleeps on a body of water without being drifted ashore in breezy weather is by keeping one foot tucked up and unconsciously paddling with the other. This has the effect of making the bird describe small circles, but I cannot understand why it does not lose ground at the completion of each, in the same way that a soaring bird does in the air by drifting slowly to leeward.

I do not know whether the sexes of such wild birds as are quite outside the influence of game-preserving balance each other with any degree of exactitude of numbers in all species, but I am assured by several Sparrow-catchers that they generally take more males than females, and this assertion is certainly borne out by the bags of two men whom I accompanied on their visits to ricks, evergreens, and hedges on three separate occasions. On the first night they caught twenty-seven birds, consisting of seventeen males and ten females; on the second, six, comprising four males and two

females; and on the third, fifteen, made up of nine males and six females.

While at St. Kilda in the summer of 1896, I noticed that the male members of a colony of Kittiwakes breeding on the Doon slept on the same sheltered piece of rock every night, and were, like many land birds I have kept under observation in similar circumstances, very punctilious about going to roost. They would alight on the rock, and, after resting for a few minutes, all rise into the air, uttering their familiar notes with vehement clamour whilst they took a short flight over Village Bay. This kind of exercise they repeated several times over before finally retiring to rest.

At the same place the Great Black-backed Gulls used to betake themselves to an isolated rock called Lavenish every evening to sleep, but were back again by daydawn each morning to scrutinise the beach for food.

I do not know when Terns sleep, but am persuaded that they indulge in very little, for whilst staying on the Farne Islands last summer I used to hear the colony of Sandwich, Arctic, and Common Terns making as much clamour and din between eleven and twelve o'clock at night as they did at the same time during the day.

I think there is every reason for believing that many members of the Gull family sleep upon the sea even during the breeding season, for in the beginning of June I have observed both Herring and Lesser Black Backs beyond the Dogger Bank at the first peep of day assiduously examining the fishermen's nets. I am aware, however, that they fly by night in summer-time at any rate, for I have seen them come and alight close beside me

BARN OWL.

(Photographed by Magnesium Flashlight.)

as I sat upon the beach, within a few minutes of midnight.

Stormy and Forked-tailed Petrels sleep on the sea when not engaged in breeding operations; but whether they take their rest by day or night, it is impossible to say. It would appear, however, from their habits during the nesting season, that they are diurnal sleepers, for they are never to be seen on land during the daytime. I have spent days together on and near ground occupied by colonies, but never yet saw a member of either species, excepting when it was taken by force from its nesting burrow. They come forth at night and feed their young during the hours of darkness.

At St. Kilda the breeding-holes of the Forked-tailed species are mixed up with those of thousands upon thousands of Puffins; and how a bird, in the dark, can distinguish its own burrow amongst such a bewildering crowd of others exactly like it, so far as human discernment can make out, is to me a mystery.

Owls sleep by day in thick holly bushes, in hollow trees, holes in rocks, amongst ivy growing round trees, in old ruins, and amongst deep heather and furze. The Barn Owl figuring in our illustration was photographed by means of a magnesium flashlight in an old barn in Essex.

These birds are popularly supposed to come forth only at night-time, but such is by no means the case. When a Barn Owl has a family of young ones to feed she may often be seen on a dull afternoon assiduously quartering a hedgerow in search of prey long before dark. A year or two ago, whilst staying with some friends near Leatherhead, I was standing under an apple tree in an old orchard about five o'clock one cloudy

July evening, when one sailed silently over a low hedge, and, instantly checking its flight, flopped into the long grass six or seven yards from where I stood, and secured a mouse, which it took off firmly grasped in one of its feet. I waited for a quarter of an hour or so, to see if she would come back to the same place, but she passed the orchard, and, going into some hayfields beyond it, soon returned with another mouse, which she held in her beak.

I have, whilst trout-fishing in the North of England, seen a Tawny Owl venture forth into a dark ravine in the middle of the afternoon and suffer a thorough mobbing by a crowd of small birds as he sat winking and blinking on a boulder.

The Nightjar is another bird which sleeps by day and roams along heathery hillside and over furze-clad common by night in search of its prey. It generally roosts upon the ground, and harmonises so closely with its surroundings that it is very difficult to detect until it has been flushed right under its disturber's feet. Sometimes the bird retires to rest on the branch of a tree or upon a rail, and does this in quite a different way from all other British birds. Instead of sitting across a bough, it lies along it, and thus very materially lessens its chances of discovery by the casual passer-by.

Some species retire much earlier to rest, and rise much later in the morning, than others. In the early spring Robins and Thrushes may generally be heard rattling off their notes when nearly all other birds have gone to rest, and on a fine evening often when the stars are blinking overhead. Grouse, Larks, and Wheatears, all rise so

early that they may be heard long before they can be seen.

That some birds require very little sleep indeed, appears to be certain; for I have heard the Nightingale, Corncrake, and Peewit at almost every hour of the day—and night, too. Many people have little idea that the first-named bird sings during the day-time, as its notes are all but drowned in the general woodland chorus.

The Sedge Warbler sleeps amongst nettles, in hedges and thickets; and if a stone or clod of earth be thrown into the place where it is roosting the bird will at once begin to rattle off its song.

That birds may, upon occasion, mistake the rising of the moon for the coming of another day I am fully convinced; for on the 3rd of June, 1893, I had unmistakable proof of the fact at Slyfield Manor House, near Cobham, Surrey. My friend, Mr. Robert Harker, and I retired to rest at midnight, and threw the lattice window of our bedroom wide open, in order to listen to the nightingales, which are particularly numerous in that neighbourhood. The moon was just rising, and we were astonished to hear a thrush commence to sing in close proximity to the house. There could be no mistaking the fact, for we were both perfectly familiar with every note of the species, and the bird continued to sing for some considerable time. I have also heard the cuckoo sounding his name lustily when it was quite dark.

It is an interesting fact that such birds as stay with us all the year round have about eight hours more rest in mid-winter than in mid-summer; but whether they spend a lot of this time awake, or that a lower temperature conduces to more sleep, it is difficult to say. Be this as it may, however,

our observations upon House Sparrows incline us to think that they sleep sounder in summer than in winter; for during the former season they are easier to approach and examine, with their heads buried in their feathers, than in the latter.

I think it will be found that the great majority of birds sleep in similar situations to those in which they have been bred; however, there are many notable exceptions to this rule. Pheasants are hatched on the ground, and roost in trees—after their autumn moult at any rate; Fieldfares nest in trees, and often sleep upon the ground, as I have proved again and again by flushing them from bare fields on dark winter nights.

We have endeavoured to take photographs of birds on their roosts in summer-time, but found it impossible on account of the thick foliage. The accompanying picture of a red underwing moth in the act of sucking up an entomologist's rum and treacle from the bark of a tree, however, shows the possibilities of the magnesium flashlight.

RED UNDERWING MOTH.
(Photographed by Magnesium Flashlight.)

CHAPTER VII.

SEA-BIRDS AND THEIR HAUNTS.

ALTHOUGH at first sight this chapter may appear to overlap to some extent those on St. Kilda and its feathered inhabitants, it will deal largely with birds which do not breed on the inaccessible home of Fulmar and Forked-tailed Petrels.

The pictures and text have been brought together from such widely separated places as the Farne Islands, Bass Rock, Ailsa Craig, Inner and Outer Hebrides, and the Saltees off the south coast of Ireland.

During our visit to the Farnes last summer we were fortunate enough to be able to land upon the Megstone one calm day, and study, to our hearts' content, the fine colony of Cormorants breeding there. The sun was hot, and the air almost still, and directly we set foot on the rock our nostrils were assailed by the foulest imaginable stench, arising from pieces of fish in all stages of decomposition, dead young birds trampled to incredible flatness, and streams of liquid guano, which trickled down the sides of the crag, and stood in festering pools in every crevice and declivity.

Upon our approach, most of the old birds took their departure, and such of the young ones as were able to leave their nests began to splash

and crawl their way across the filthy rock. They appeared to be filled with terror, and trembled and cried out in the most piteous manner, disgorging all kinds of fish, and bedaubing themselves with guano as they fled. Some idea may be gathered of the poisonous uncleanliness of a Cormorants' breeding station when it is mentioned that for years after nothing whatever in the shape of moss or lichen will grow upon rocks which these birds have used.

CORMORANT AND YOUNG.

One old female stood boldly by her nest and young ones, until my brother by careful stalking got within a few feet of her and made several photographic studies. It was quite laughable to watch the bird give the biggest of her three young ones a vigorous peck upon the head, and force it to lie down every time it ventured to make its presence known to us by lifting its head and taking a look round.

Although our visit was paid as late as July 2nd, and many of the young Cormorants were

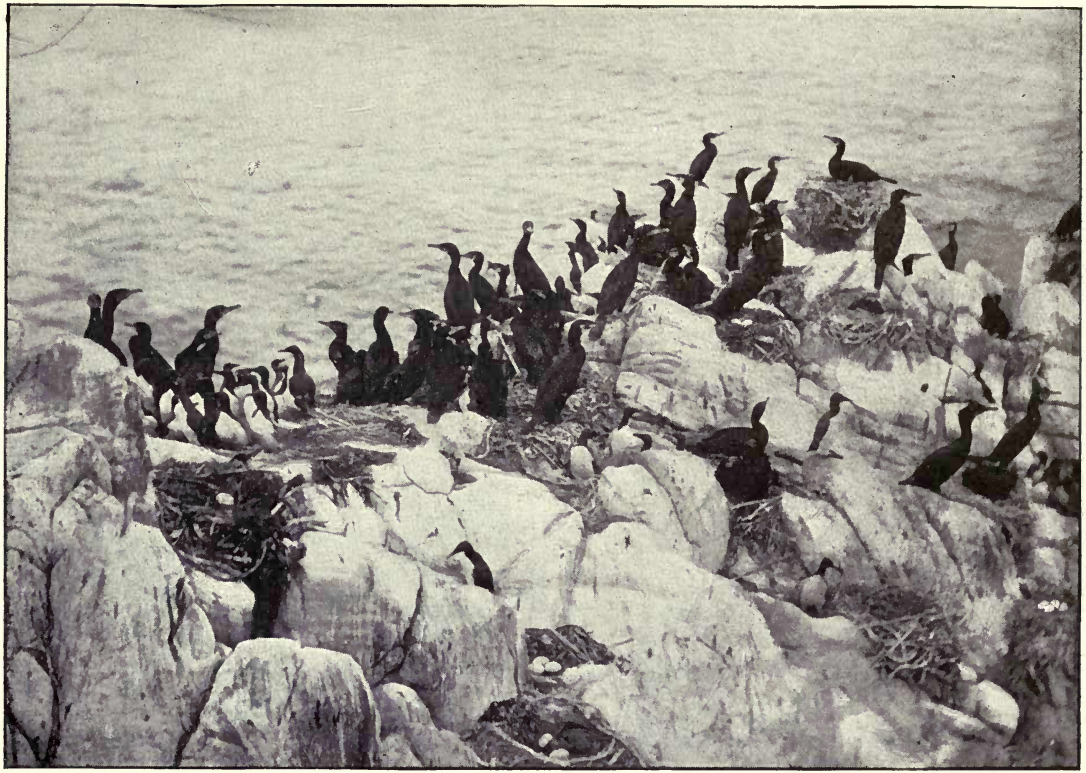
nearly ready to take to the sea, I saw one nest containing three perfectly fresh eggs.

We were much amused to see two or three Lesser Black-backed Gulls, which may not inaptly be described as the Carrion Crows of the sea, take advantage of the enforced absence of the old Cormorants, and improve the shining hour by alighting close to us and picking up such unconsidered whiting and eels as had been disgorged by their terrified offspring.

Our full-page illustration opposite was obtained under somewhat peculiar circumstances (detailed in Chapter XI.) on an isolated rock, curiously enough, also known as the Megstone, near the Saltees.

At the Knoxes and Inner Wide Opens, two islands of the Farne group, connected at low water by a ridge of boulders and shingle, dotted all over with bags of cement from a ship wrecked here years ago, the Sandwich, Arctic, and Common Terns breed in a vast colony, which, upon being visited, deafens the ear, dazzles the sight, and paints the clothes. Terns, to my mind, are the daintiest sea-birds in existence, and by far the most wayward.

When the colony is approached, its members all rise into the air like a cloud, and after twirling and twisting, screaming and fighting, for some time, they are all of a sudden stricken with what appears to be a kind of momentary madness. Right in the middle of one of their most graceful evolutions and noisiest of protests, they become instantly silent, and dart with tremendous rapidity to right and left of the line of flight the majority of them were pursuing when overtaken by the strange impulse. The swish of their long sword-like wings upon these occasions rends the air and startles the ear with a bewildering



CORMORANTS AND GUILLEMOTS ON THE SALTEES.

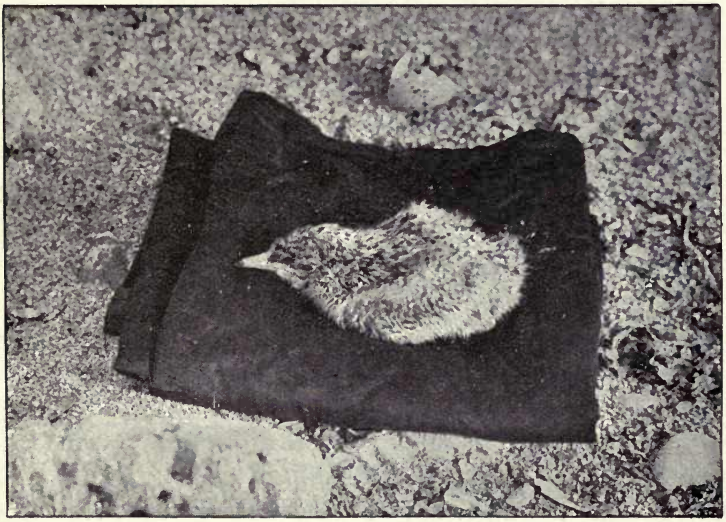
change of sound. I asked the watchers (Darling and Patterson) if they could account for this strange behaviour, but, although they had often noticed it, they were quite unable to suggest any explanation.

The summit of the Knoxes, a low island formed partly of rock and partly of shingle and sand, is occupied almost exclusively by Sandwich Terns. When we visited it, most of the young birds had been hatched off, and were either crouching amongst the sand and shingle or running about, according to their age and strength. They varied much in colour, some being quite a dark buffish brown, and others a light creamy grey. The watchers assert that the down upon each chick's back corresponds in coloration with the egg from which it has been hatched.

Of course, it was of no use attempting to test this statement by comparing the colour of a young bird lying beside an unhatched egg, because the one afforded no manner of clue to the other, on account of the fact that it is possible to find two eggs in a Tern's nest as unlike each other as any two in a thousand. I therefore only took the evidence of such chicks as I could compare with the shells they had just quitted, or were in the act of emerging from, and must confess that they exhibited a striking general resemblance of coloration.

Many of these young ones were very difficult to see, on account of their wonderful harmonisation with the sand upon which they lay stretched out flat as they could make themselves. In order to show the protective value of their coloration, I got my brother to make the studies appearing on the opposite page. Of course, they are little more than suggestive, on account of the localisation in a small

YOUNG SANDWICH TERN ON SAND.



YOUNG SANDWICH TERN ON BLACK CLOTH.

picture and the limitations of reproduction in black and white. The young Tern upon the sand is really far more conspicuous in the illustration than in a natural state, and it must be borne in mind that, in looking at a small picture, the eye is not confused by a variety of fine shades of colour or loss of that quick and certain perception produced by wandering over an infinite number of objects of similar size, shape, and appearance, to be met with on a rough, shingle-covered beach.

What puzzles me greatly about protective coloration is that, whilst these young birds instinctively recognise its value, some of their parents do and others do not appear to do so. As a rule, Sandwich Tern's eggs harmonise closely with their surroundings, and even the experienced field naturalist has to exercise a great deal of care to avoid treading upon a clutch when visiting a breeding station. A friend of mine told me a few years back that he had once visited a colony of these birds on an island where the natural breeding accommodation was so limited that many of them had conveyed patches of pebbles on to the grass, and laid their eggs thereon. We both recognised this as a wonderful instance of a knowledge of the value of protective coloration; but I must confess that last summer at the Farne Islands my faith in the wisdom of these birds received a rude shock when I met with five or six clutches of eggs lying most conspicuously on small circular patches of broken mussel shells, the dark blue of which contrasted violently with the golden grey of the sand.

I saw a Sandwich Tern's nest with four eggs in it, and Watcher Patterson told me that he had once found an Arctic Tern's nest containing five —doubtless the production of two birds.

TERNS AT HOME

We had the good fortune to see and hear a Roseate Tern two or three times over. Its note is very similar to that of a Corncrake in harshness, and easily distinguished from those of the other Terns. I tried to watch the bird to the ground, both with my binoculars and with the unaided eye, thinking I might then be able to trace it to its eggs, if it had any, but in vain; it was always lost in the ever-changing, swooping, swirling throng of white-winged creatures, and I was obliged to give up the quest.

On the Inner Wide Opens a great number of Common and Arctic Terns breed, and within two or three feet of their eggs we found clutches belonging to Oyster-catchers and Ringed Plover. Whilst on this island, I narrowly escaped having my cap knocked off my head by an angry Tern, which swept down upon me again and again with a loud scream, because I approached its nest, situated amongst some sea campion, too closely.

When fishing for their prey Terns always plunge into the sea head to wind. I noticed that upon arriving at their breeding station, if they were unable to discover their own offspring amongst the crowd, running about like a flock of miniature sheep, they rose again and flew away with the tit-bit they had brought in their bills. Curiously enough, whilst sitting at the end of St. Cuthbert's little church, I could always see more birds flying away from the Tern-inhabited islands with food in their bills than to them. The watchers told me that they had often been struck by the same strange fact, and concluded that the birds were flying away to escape robbery by their neighbours, an ever-clamorous crowd of which are continually hanging about over the islands.

The defenceless character of all the Terns makes their eggs and young easy prey for any winged depredator that happens to come along. Jackdaws fly over from the mainland to harass them, and sometimes even levy toll upon the nests of the Lesser Black Backs and Herring Gulls, whose eggs they finish devouring on the top

LESSER BLACK-BACKED GULLS.

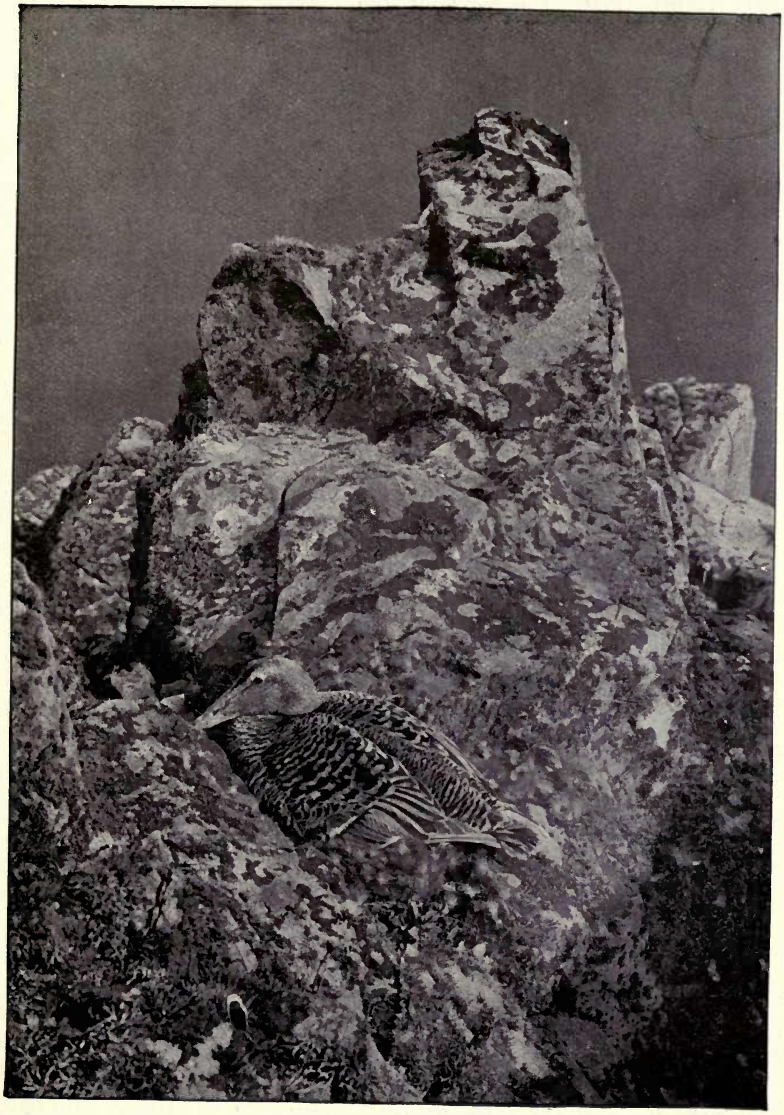
of St. Cuthbert's Tower. This necessitates a periodical inspection of the little bit of flat roof by the watchers, who have to depend upon it for the collection of their fresh water, and therefore cannot afford to have it fouled by offensive matter.

Often our attention would be called across the water by a great clamour and commotion, and, turning our field-glasses in the direction from whence it came, we could see a vast congregation of Terns hovering close over some particular part of their

breeding station in a wild, shrieking mass. Presently a Lesser Black-backed Gull would rise and take his departure, followed by a host of angry but quite helpless Terns. Peregrine Falcons occasionally pay the Farne Islands a visit, and fly away with whatever they desire without let or hindrance.

The mortality amongst sea-birds of all kinds, reckoning the loss of eggs and young ones, from purely natural causes alone, must be very great in the course of a season. We saw a great number of young Terns lying dead everywhere upon their islands, and Watcher Darling told us that two years ago very few Arctic or Common Terns got away. He picked up several dead ones with sand-eels in their bills, and concluded that there was no small fry for them, and that the eels, although the natural diet of Sandwich Terns, were too large for the young of the smaller species to swallow.

There are now a great number of Eiders on the Farnes. I counted thirty-four barren ducks one day all together in a little bay, and seventeen drakes in another. As soon as the females begin to sit the males leave them, and the glories of their breeding plumage commence to fade. Some of the ducks are wonderfully tame whilst brooding, and will allow themselves to be stroked upon the back without appearing in the least disturbed by the attentions of the intruder. The Duck which made her nest for so many years in succession at the foot of St. Cuthbert's Tower, and was recognisable by a peculiar white spot on the back of her head, did not put in an appearance this year, and the watchers concluded that she had been shot by some gunner during the winter. I saw one nest with eight eggs in it, and Darling informed me that he



EIDER DUCK ON NEST.

had known birds succeed in hatching off clutches of from two to ten, and had seen, during his long experience, one nest containing fourteen and another nineteen eggs, but in neither case were any ducklings brought off. There can be but little doubt that in these last cases two or more females must have contributed. I found two nests one day within a foot of each other. One of them had seven stale eggs in it covered with sodden down,

WILD DUCK ON NEST.

and the other the remaining shells of a successful hatch off.

Although I have found and examined a goodly number of Eider Ducks' nests, I have never yet met with one which could beat the Wild Duck at lining one, in point of quantity of down employed. The above illustration of a Wild Duck on her nest was obtained close to London, and shows to what a remarkable extent the bird must have denuded her under-parts.

When leaving the nest of her own accord, this down is carefully folded over the eggs, and, whether

it is intended to or not, serves the useful twofold purpose of preventing an undue escape of heat and lessening the chances of discovery by a prowling enemy.

Young Eiders are the hardiest little birds in their own element I have ever seen. They will dash into a boiling sea from almost any height a

YOUNG EIDER DUCK.

day or two after they have made their advent into the world.

One rough day we went out to try to photograph the breakers as they tumbled in upon the rocks at the northern end of the Farne. After making one or two studies we walked round the north-west corner of the island, and suddenly came upon an Eider Duck and seven small young ones. We stopped, with the intention of withdrawing, but as the old bird did not seem in the least

disconcerted by our presence, we stood still and watched. She walked deliberately to the edge of the cliff, which could not have been less than twenty feet deep, and without the slightest hesitation went over into the sea. To our astonishment, her little ducklings followed her into the turmoil of waters one by one in the most unconcerned fashion. In less than a minute she was gallantly breasting the big seas, with her offspring touching her tail and each other so closely that the whole family might easily have been covered by an ordinary pocket-handkerchief.

We were anxious to obtain a photograph of an Eider duckling, but found it quite impossible to get near enough to one for such a purpose.

One day, however, a very strange thing happened. We were photographing the watchers and their boat in a little sandy bay, when the very fowl we wanted walked right up to us with the most uncanny deliberation and fearlessness. Whether St. Cuthbert—with whom, I believe, the fowls of the air were on very good terms whilst he lived on the island—sent it, or the bird mistook one of us for him, I cannot tell; but the strange incident filled us all with wonder.

Watcher Patterson told us he once saw an Eider Duck with five small young ones accidentally leave two ashore in a deep crevice in the rock when she took to the sea. A Lesser Black Back happened to be passing at the time, and, seeing his opportunity, stooped and carried off one of the downy little creatures, which he swallowed in mid-air. No sooner had he accomplished this feat than he descended again, and, seizing the other, flew away with it.

KITTIWAKES.

We visited the far-famed Pinnacles again, and found them crowded as thickly as ever with Guillemots, many of which evidently had young ones, for they were edging their way into the seething noisy mass with sand-eels in their bills. Below them were a number of Kittiwakes, and their downy young ones, all of which were panting and gaping from the oppressive heat.

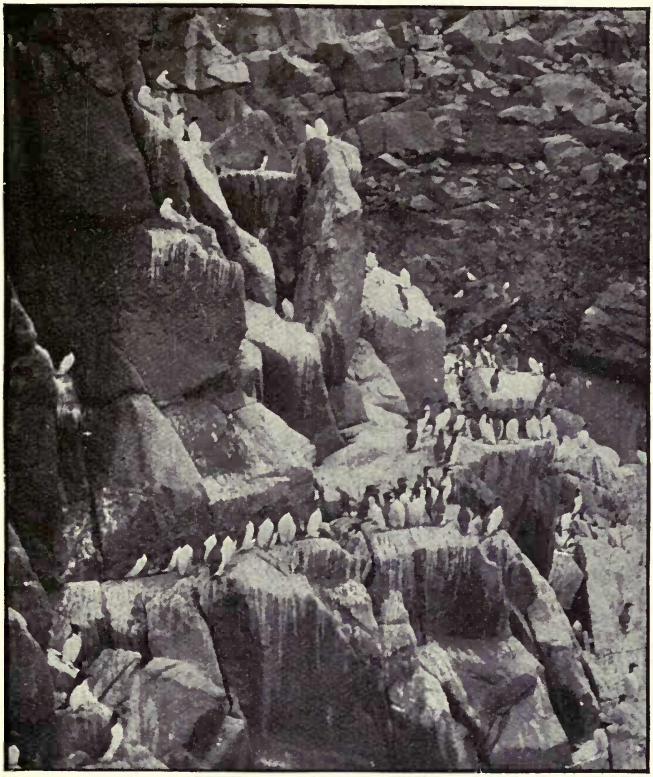
YOUNG BLACK GUILLEMOT.

Our pictures of the Guillemots and Kittiwakes were both obtained on the Saltee Islands.

A few land birds occasionally breed upon the islands. Some years back a Linnet made its nest in a small elderberry tree growing in the Farne lighthouse-keeper's garden, and a Blackbird amongst some rhubarb stalks. A member of the last species also made its nest not long ago in a hemlock plant growing on the Wide Opens.

A number of Shelducks breed amongst the sand dunes, between Sea Houses and Bamborough Castle on the mainland, and the fishermen look upon them as the most artful birds in existence. As an instance of a Shelduck's cunning, they assert that when she leaves her nesting burrow she drags her tail upon the ground, so as to obliterate her footprints in the sand, and thus save her nest from discovery and molestation.

The Bass Rock is one of the finest Gannet breeding stations in the British Isles. It is now under the proprietorship of Mr. Colin Mackenzie, of Canty Bay Hotel, near North Berwick, who owns



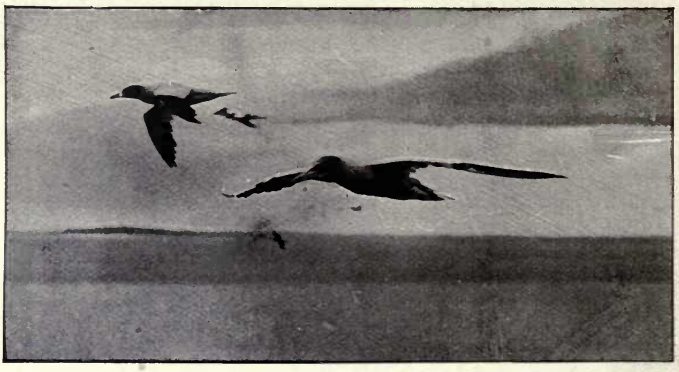
GUILLEMOTS.

every facility for conveying visitors in almost any sort of weather across the mile and a half or so of sea dividing it from the mainland.

We have been twice on the rock during the last two or three years, but on neither occasion have we been favoured by good weather for photography. Our second visit was paid at six o'clock in the

morning on July 7th, 1897, when we found the Solan Geese still busy building, or perhaps, more strictly speaking, repairing their nests, for I saw one hard at work adding to its nursery of sea-weed, although it contained a good-sized young one.

It was quite comical to watch one of these great birds come creeping along the edge of a cliff, in the face of a stiff breeze, with an immense

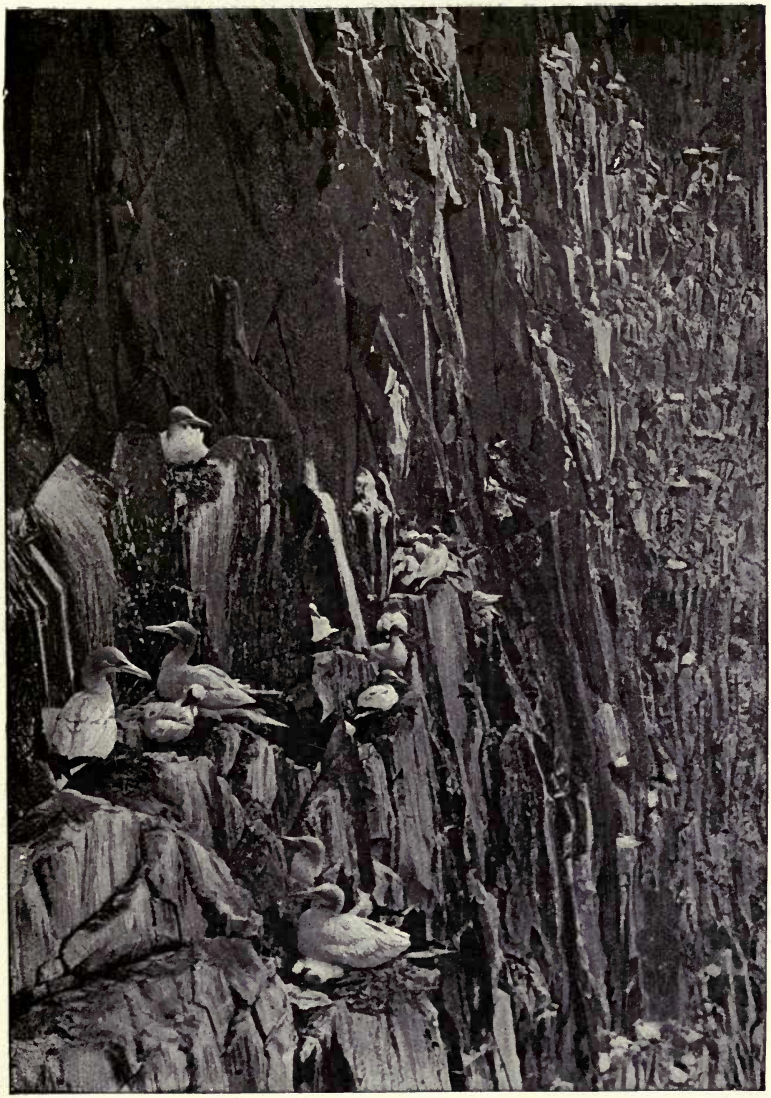


GANNETS ON THE WING.

tangle of weed hanging from its bill in such a way as to form a kind of rudder, whose eccentric flappings made its bearer wobble strangely in flight.

I saw two birds steal the materials of a neighbour's nest, which they pulled almost to pieces during her temporary absence, caused by our picture-making efforts; and close to the same place we witnessed a terrible battle, which ended in both the contestants rolling in a confused heap right over the cliff.

Gannets with young are very easy birds to photograph, as they will allow the naturalist to walk about amongst them with no more protest



GANNETS ON BASS ROCK.

than a vigorous peck at his legs. In one case a bird in the foreground spoilt a picturesque group which my brother desired to take, and, as she would not leave her young one, I was obliged to push her off the cliff with my cap folded tightly round my right hand.

I was greatly astonished at the length of time such large birds could remain poised over one particular spot, with their wings outstretched and motionless. Of course, it was managed by taking advantage of the pressure of a strong and steady breeze striking the face of the cliff and then being deflected upwards, but the grace and apparent ease of it were truly marvellous.

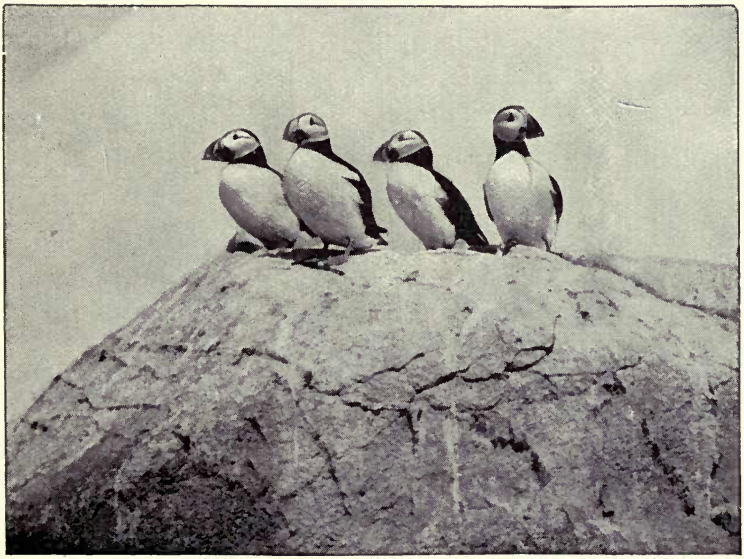
My brother was anxious to obtain a picture showing a good crowd of Gannets in it; and when he descended for that purpose to the very edge of the cliff, and began to stalk the birds (with his camera in front of him) from ledge to ledge—off any of which the slightest slip meant a headlong plunge of a hundred and fifty feet into the sea below—I saw one of the men who had accompanied us in the boat turn away, and heard him mutter to himself, "Venturesome divel! he'll never go off the Bass alive."

While we were at work a flock consisting of several hundreds left the rock, and, flying out into the Firth of Forth, went through a mazy sort of aërial waltz, which lasted half an hour.

The Bass Rock is a much easier and safer place to visit than Ailsa Craig, but, except in the case of Gannets, it is not so rich in sea-bird life.

Whilst walking round the loose sides of the latter, Puffins scuttle out of every conceivable and inconceivable hole and cranny, and are easily

COMMON GULL'S NEST.



PUFFINS AT HOME.

caught as they tumble down the steep hillside leading to the edge of the cliff, where they gain wing and fly away out to sea. At the Bass, Tammy Norie, as they are called, were by no means numerous last summer, and hundreds of forsaken

NEST OF BLACK-HEADED GULL

burrows, stuffed almost full of wind-drifted feathers. gave the place the appearance of an old worked-out mining district.

A Puffin is a grotesque-looking bird at any time during the breeding season, but to watch three or four standing on a piece of timber bobbing up and down in a fairly rough sea is an extremely comical sight.

YOUNG GREAT BLACK-BACKED GULLS.

Great numbers of these birds breed at the Saltee Islands, where we obtained the photograph from which the picture on page 269 has been reproduced.

On the small islands forming part of the Inner and Outer Hebridean groups, we have met with the Great Black-backed and Common Gulls, and

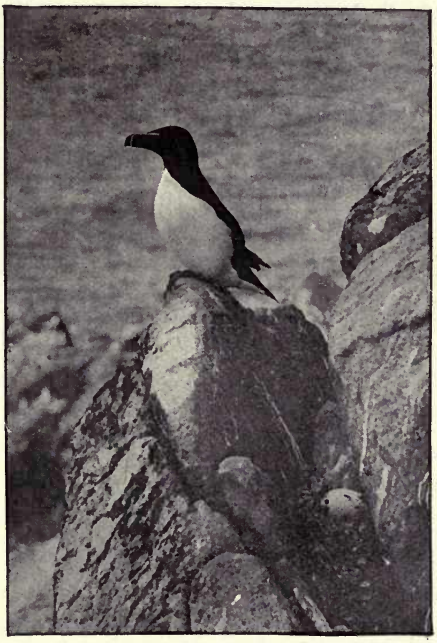
SCOULTON MERE.

their nests, eggs, and young, but nowhere in large numbers.

We have twice visited Scoulton Mere, in Norfolk, and punted across to the boggy reed-clad island in the middle of it, where breed one of the largest colonies of Black-headed Gulls to be met with in the British Isles. When within seven or eight miles of the Mere the visitor becomes aware of the presence of the birds, for they are in every field where the plough is at work, following it just like rooks. Their eggs are collected at the

beginning of the season and sold for consumption as human food. Some idea may be gathered of the magnitude of this colony when it is mentioned that as many as 20,000 eggs have been gathered in a single spring. The outside number of a clutch of Black-headed Gull's eggs is three; and although the birds lay again when robbed, second efforts are not molested.

When we visited Scoulton in the summer of 1895, the rats appeared to be committing great havoc amongst the young birds, judging from the numbers of dead and partly devoured ones we saw lying about.



RAZORBILL AND EGG.

CHAPTER VIII.

HOW CAGE BIRDS ARE CAUGHT: A DAY ON BRIGHTON DOWNS.

BEING desirous of learning something of the methods employed in catching such of our feathered friends as give pleasure by their pretty songs or interesting habits to people who cannot possibly study them in their native wilds, my brother and I journeyed to Brighton, on the 7th November, 1896, in order to interview the bird-catchers and photograph them with their engines actually at work on the Downs.

The weather had been fine and settled all the week, and the sport in full progress; but no sooner had we reached our destination than it began to rain and blow in the most disheartening fashion, and we knew that unless a considerable change for the better took place, we were likely to have to return empty-handed, for bird-catchers will not risk injury to their decoy birds by taking them out in dirty weather.

The following day dawned cold and hazy, with a very strong wind blowing from the north-east. We had a walk over the Downs, but did not see a single bird-man out. In the course of our long tramp, however, we observed a Goldfinch or two, several flocks of Linnets and Greenfinches, Starlings and Larks innumerable, besides three separate flights of House Martins. The first two companies, consisting of three and six birds respectively, were flying due

west in the strongest and most business-like fashion, and the third, containing four individuals, in exactly the opposite direction. As our chances of doing better on the morrow were more or less problematical, we returned to town without even having unpacked the camera.

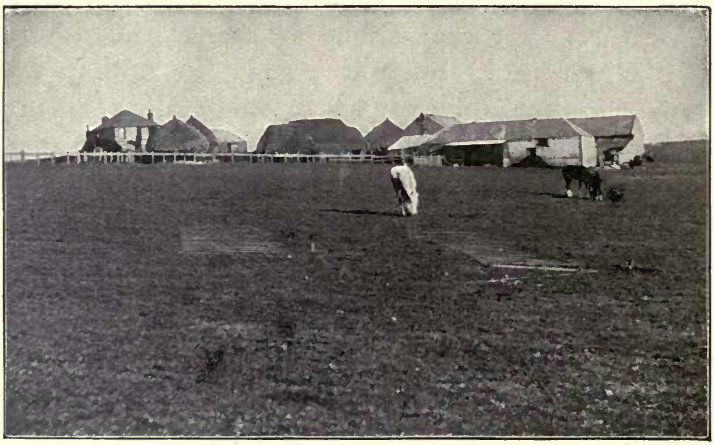
November being, according to our veteran naturalist friend, Mr. Swaysland, one of the best months in the year for our purpose, we hurried down again at the end of the week, and arrived at Brighton in time to hear all the cabbies in the station crying out, "Motor car! Motor car, sir!" in anticipation of the horseless vehicles which made their historic initial run from London on that date. I have good reason for remembering the introduction of motor cars, for on the following day, after having obtained permission to ride on one for a short distance, the thing suddenly went wrong, and although I patiently waited for an hour and a half in a biting cold wind, it utterly refused to make a start. Whatever may be the ultimate development of these vehicles it is impossible to foretell, but a great deal of uncertainty prevailed in regard to their movements when they were first introduced to our public roads. The engineer in charge of the one in question told me that it had been driven an aggregate of ten thousand miles on the Continent without a hitch, and that its refusal to start was inexplicable.

When I think of the picture that car and its owners made as they slowly trundled it out of Brighton Railway Station, to the great delight of a crowd of jeering cabmen, I can thoroughly appreciate the humour of the small boy who, in similar circumstances, walked solemnly in front of a motor 'bus and whistled "The Dead March in *Saul*"!

On the occasion of our second visit, we started

out early in the morning for the Downs with the prospect of a capital day for our purpose before us.

The first man we fell in with was catching Starlings on a piece of bare pasture land, and explained that such a pitch was the most favourable for his kind of sport. The presence of grazing Horses, Cows, or Sheep, although these were liable to walk on to his nets, he considered a great



CLAP-NETS AND DUMMY STARLINGS.

advantage, as Starlings when feeding are partial to the neighbourhood of live stock.

The nets used for catching Starlings, Larks, and Linnets are larger than those employed for securing Goldfinches or Bullfinches, and measure as much as sixty-six feet in length by six feet three inches in width. Attached to each end of the nets is a green-painted stave, which is secured on its inner end to a peg firmly driven into the ground. The fastening between the peg and the stave is such as to form an easy hinge. The pull-line is so disposed that it acts upon the outer ends of the stave-poles directly

it is jerked, and folds the nets over the intervening space shown in our illustration. It is generally a few yards longer than those used for drawing the nets set to catch smaller birds, which are from thirty to forty yards in length. If the man engaged in catching Starlings can work his nets from behind a hedge, the concealment he enjoys acts considerably to his advantage.

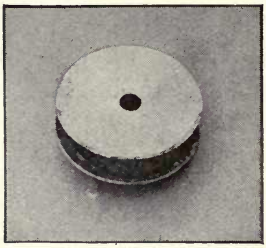
Half a dozen stuffed Starlings are stuck up all close together, as if busily engaged upon a rare find of grubs in the clear piece of ground between the nets, and a live one called a "Jackey-bird" is secured to what is known amongst the bird-catching fraternity as a "flur" or "playstick," which can be moved up and down by means of a string which the fowler holds in his left hand.

As soon as a flock of Starlings is seen approaching, the "Jackey-bird" is set in motion, and upon espying this, and the little crowd of dummies who are apparently enjoying good things on terra firma, the individuals in the air swoop down to participate in the feast, and are promptly covered by the fowler's nets.

The young fellow to whom the pair of nets figuring in our illustration belonged, told us that he had once caught twenty-seven dozen Starlings in a single day at a place called "Happy Valley." One morning in August he secured no less than forty-eight birds at a haul, and assured us that they "kicked up" a deafening row by way of protest.

Upon leaving this man we walked over to a favourite piece of ground, where we counted no less than seven sets of nets, spread in such close proximity to each other that it appeared difficult to understand how they could be worked without interfering with each other's sport.

Bird-catchers generally work in pairs, and whilst one man attends to the nets the other beats the adjoining ground in order to send the birds towards his companion, who imitates their call to perfection with a little tin instrument made in the form of a flattish drum with a hole through the centre. This is placed between the caller's lips, and the desired notes reproduced by forcing the breath quickly through it. Mr. Swaysland astonished me by his skill in fetching flocks of Larks in full flight from considerable altitudes to the ground with it, and quickly taught me how to use it with effect.



BIRD-CALL

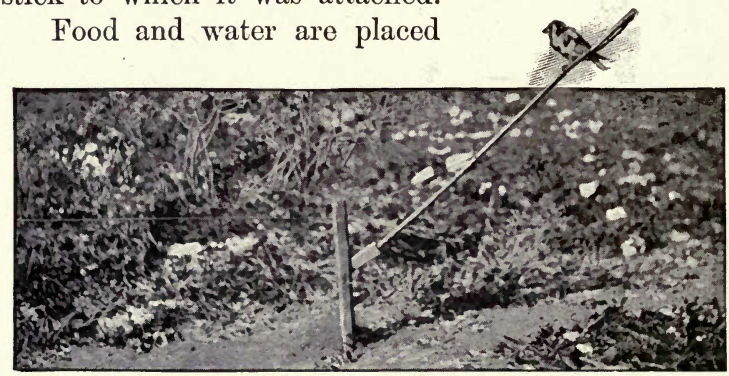
We next visited a man who had his nets spread along a steepish hillside. He had seven call-birds, consisting of two Linnets, a Goldfinch, Greenfinch, Chaffinch, Siskin, and Redpoll, each in a small green cage, disposed as represented in our illustration on page 279. He had also four "Jackey-birds," attached to playsticks situated between the

CALL-BIRD CAGE

BIRD-CATCHER WITH CLAP-NETS ON BRIGHTON DOWNS.

nets. These consisted of a Goldfinch, Chaffinch, Greenfinch and Linnet, and were tethered to their movable perches by means of a light brace passed round the body before and behind the wings, and having a swivel which prevented the little captives from twisting the string between them and their playsticks and thus becoming entangled. The small picture shows a Goldfinch on the raised playstick to which it was attached.

Food and water are placed



PLAYSTICK AND LURE BIRD.

within reach of the "Jackey" or "play-birds," so that by addressing themselves to the meal provided they may induce others to alight and join them in the feast.

Often the little prisoners observe flocks of their own species passing overhead, and begin to attract them before the fowler himself has become aware of their presence. We saw lots of birds, however, that would not be lured either by the blandishments of the decoys or their well-imitated call-notes from the body of the little tin drum in the mouth of the nets-man. They had seen too many of their friends taken by the deception, and were wise in their generation.

When birds are heard or seen approaching the

nets the playsticks are instantly elevated by a pull on the string commanding their movements, and the "flur" or "Jackey" birds perch upon them and survey their surroundings. As soon as the strange birds have been lured within the nets the playsticks are released, and the decoy birds flutter to the ground, the nets being suddenly pulled over the unwary visitors. So quickly can this be accomplished by an experienced hand that we witnessed one man drop his playsticks and bring his nets over a Linnet before it had actually alighted upon the ground.

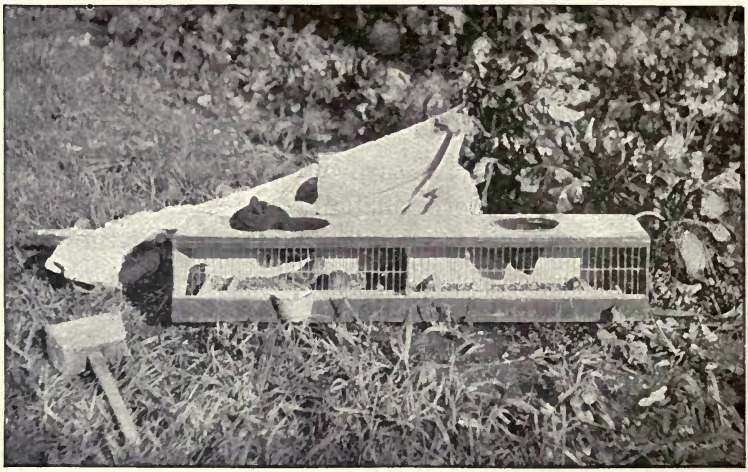
The best call-birds are not used on the playsticks, but are kept constantly in the cages, and are so valuable to the bird-catchers that at the commencement of the season Goldfinches often change hands at a pound apiece and Linnets at from ten to fifteen shillings each.

Birds caught young and tamed in a cage are considered far superior to those reared from the nest for calling purposes, as their notes are more perfect and consequently more seductive.

The man in our picture on page 279 had caught two dozen Greenfinches before eleven o'clock on the morning we visited him, and told us that the best day's sport he ever remembered having had supplied him with eleven dozen birds, consisting of Larks, Linnets, Redpolls, Goldfinches, Greenfinches, Chaffinches, Titlarks, and Starlings. He seemed surprised that anybody should take sufficient interest in bird-catching to photograph it in operation; and when I jocularly told him that we had come to Brighton to "immortalise" him, he looked alarmed, and said he hoped our picture wouldn't turn up against him at Lewes Assizes.

In order to show how newly-caught birds are

caged, my brother took a photograph of a receiver belonging to two young fellows, who had their nets spread alongside a plot of mangold wurzel. The top of the cage has two circular holes in it. These have each the leg of an old cotton stocking tacked neatly round them, and once the captured bird has been thrust down the ingenious funnel



BIRD-CATCHER'S RECEIVER

thus formed its chances of escape are very small indeed.

Bird-catchers carry two tin bottles out with them —one containing tea or such other beverage, as fortune will afford, and the other water for their birds, about whose welfare they are, as a rule, most solicitous.

The labour of carrying the nets, call-birds, and other paraphernalia about the country is divided between the two men in partnership, and the picture opposite illustrates how the plant is conveyed from place to place. The handkerchief in the hand of the man on the left contains the bodies of such

BIRD-CATCHERS AND THEIR PLANT.

birds as have been slain for the table during the morning. Hen Linnets, Greenfinches, Larks, and Chaffinches are mostly killed when caught.

One of the grandest sights, from an ornithological point of view, to be seen on the South Coast of England in winter-time, is undoubtedly the immense flights of Larks, Fieldfares, and Redwings. These great avian movements generally occur when snow is on the ground and a sharp visitation of frost is holding sway, but are not seen every year. The birds all trend westwards in their flight, and present an almost unbroken stream, which appears to be composed literally of millions of individuals.

During the few days of sharp wintry weather which we experienced in January, 1897, there was an exceptionally large flight, and whilst it was in progress the Brighton bird-catchers secured no less than a thousand dozen Larks alone before twelve o'clock one morning.

Although this appears to be a heavy bag of sweet singers, it is in reality but an insignificant tithe upon the prodigious whole. The vast flocks which visit the Downs in winter are believed by the bird-catchers to come from the Continent. Whether this be so or not it is pretty certain that there is never any lack of Larks in England, and often more than sufficient for the farmers of arable land, whose early corn they damage when it is shooting.

In Scotland, on the other hand, the bird is said to have decreased in numbers during the last decade or two, owing to the introduction of railways.

Flight-netting is managed with one net only, measuring twenty-five yards in length by seven feet in depth. It is worked on the same principle as the ordinary clap-nets already described, but is always pulled over so as to meet the birds in their flight

and strike down all those which happen to be travelling low enough to come in contact with it. Of course, success depends to a considerable extent upon the judgment and skill of the man, who makes the net describe its half-circle by a sudden pull upon the hauling-line. An experienced hand has been known to kill seventy or eighty dozen Larks in a single day.

As some indication of the abundance of bird-life on the Downs in the late autumn, a good day's sport with the clap-nets round Brighton yields eight or ten dozen Linnets, ten or twelve dozen Greenfinches, two or three dozen Redpolls, seven or eight Goldfinches, and probably a Siskin or two, and a few Cirl-Buntings or Bramble-Finches.

Occasionally a wild hybrid—between a Greenfinch and Linnet, Goldfinch and Greenfinch, Goldfinch and Linnet, Twite and Linnet—is caught.

Sparrow-hawks and other members of the Falconidæ are sometimes caught in the act of stooping at the poor little "Jackey" or "flur" birds, and short shrift quickly follows their entanglement in the fatal meshes. Rooks, too, are occasionally bagged as they fly low over the nets, which suddenly rise like a pair of huge, all-enveloping jaws to encompass their destruction.

Bullfinches are caught by many cottagers in Kent and Sussex during the winter months with the kind of trap shown on page 287. A call-bird is placed in the lower compartment of the cage, and the upper one is baited with privet berries, which can be easily reached by the unwary victim through the open doorway shown in the picture. The trap is hung up in a tree, and as soon as a bird enters to partake of the good things provided by the benevolent peasant, its weight

releases a small door above its head which instantly closes, and eventually the little prisoner finds its way, along with five or six others, to a bird dealer's shop in the nearest town.

Larks are caught on dark nights, as they roost upon the ground, by means of a net fifty yards long and eighteen feet deep. It is mounted on two poles, one at either end, and carried along by a couple of men with the top about four feet off the ground and the bottom just touching the grass, so as to disturb the sleeping birds and make them rise. Directly a Lark flutters upwards the net is dropped, and the victim, discovered by its efforts to escape, is taken out. Sometimes several birds are secured at one drop of the net, and often Partridges, Fieldfares, and Coots have also been taken. Of course, it is of no use attempting this kind of nocturnal sport where fields have been "bushed" by gamekeepers to prevent poachers from netting Partridges.

There are some favourite bird-catching places during the autumn migration at considerable distances from Brighton, and when the men intend to visit these they start the night before so as to be on the ground they intend to work by dawn the following morning.

Most of the birds caught on the Downs find their way to the London markets; the live ones to such quarters as Great Andrew Street, Seven Dials, and the dead ones to Leadenhall.

The character of the ground upon which we found nets spread did not appear to exercise any influence, as might have been supposed, over the men in the selection of their pitches. We found some on stubble and land from which root crops had been removed, whilst others were trying their

FINCH TRAP.

luck upon grass and fallow-fields; in one or two cases, where dung had been spread. One couple of young fellows, who must I think have been entirely devoid of olfactory nerves, occupied an upland slope which was thickly manured with pieces of fish in all stages of decomposition. My brother made our friend Swaysland laugh heartily by gravely inquiring of the men whether they were catching Cormorants —the humour of the idea being suggested by the similarity of the smell to that encountered where these birds breed.

Bird-lime is hardly ever used now amongst Sussex bird-catchers, but is still employed in the West of England and on the Continent for taking Goldfinches, Siskins and Redpolls.

Cock Chaffinches are caught in some parts of the country by means of bird-lime during the early spring, when they are bubbling over with song and pugnacity. The method adopted is to take out a tame bird in a small cage tied up in a handkerchief, where the little creature will continue to rattle off its defiant notes all day long, and hide it amongst some bushes close by where a wild bird is singing. A stuffed bird is then set up just over the caged one, and, although well in view, is surrounded by a number of twigs and sticks liberally besmeared with bird-lime. The unsuspecting free bird on hearing the song of the hidden captive, at once concludes that it proceeds from the stuffed one, at which he instantly dashes in a storm of anger, and, knocking it over, becomes entangled amongst the smeared twigs.

In order to see this kind of birdcatching in actual operation we went out with a crack Seven Dials man one day, but he was not at all successful during the time we spent with him. When we came to the

corner of a meadow where a Chaffinch was singing, the man stuck a dilapidated dummy, which he fished out of the crown of his bowler hat, into an old field rail, and two little pieces of flat steel weighted at the base with lead and besmeared with birdlime over it, in such a position that any Chaffinch descending to do battle would be likely to touch one or both of them with its wings and become entangled. His call-birds were placed just beneath, and their cages hidden by a few handfuls of grass. One Cock Chaffinch came, but he was either too wary or cowardly to attack with sufficient vigour to be caught, and contented himself with sitting uneasily beside the disreputable counterfeit dummy, and listening to the defiant challenges of the poor little prisoners hidden amongst the grass just below. My brother succeeded in photographing him in this position.

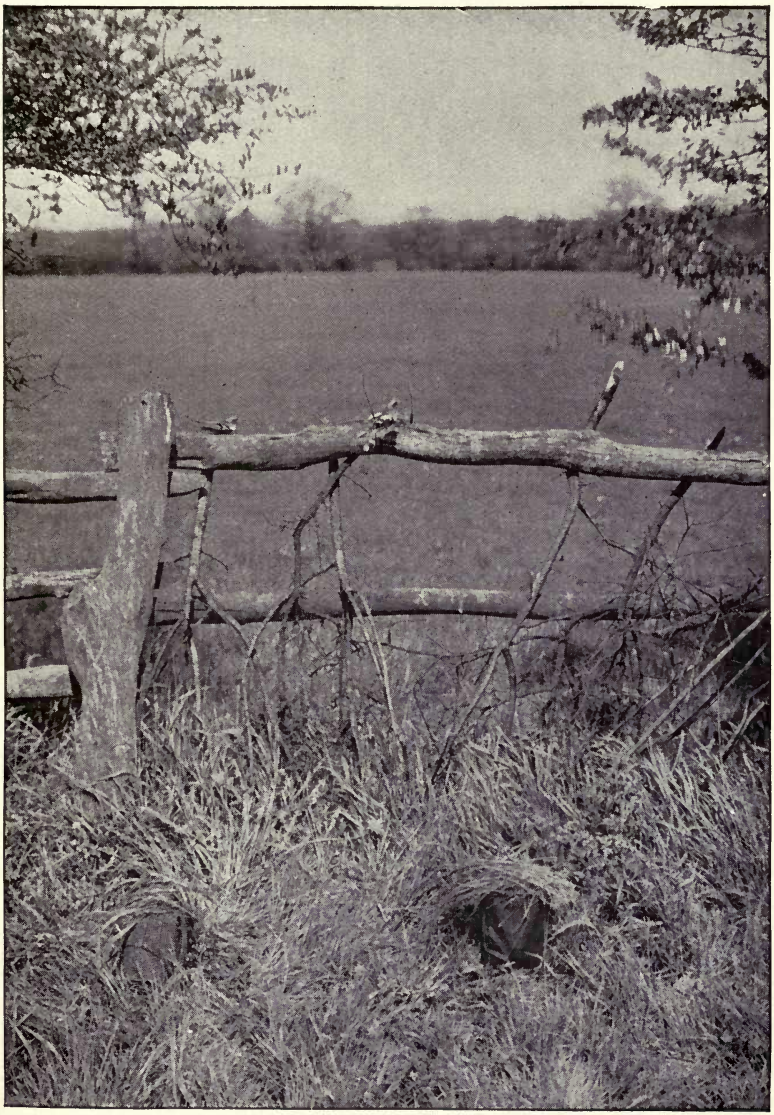
A strange peculiarity of the male Chaffinch in confinement is that the gloomier its surroundings are the lighter its heart appears to grow, for it sings best when kept in continual darkness. In less humane times the Germans used to take an unspeakably cruel advantage of their knowledge of this peculiarity and destroy the poor bird's sight with a red-hot wire.

A friend of ours has a small allotment garden on the outskirts of Brighton, which he has arranged in such a cunning manner that it forms a haven of rest for little feathered wanderers who land on that part of the coast when they are journeying northwards in the spring to their breeding haunts. It is here, too, that many of our summer visitors take a last rest before flying across the Channel and away to their winter quarters in the sunny South. This little ornithological oasis is hemmed

in on every hand by thick hedges, and surrounded by other gardens, in some of which trees of moderate size are growing. In the centre is an ideal little pool, that looks as natural as peat-smoke in a Highland glen. It is commanded by a pair of small clap-nets, which are worked from a neat little summer-house at the bottom of the garden. Our friend, who is justly proud of his home-made miniature loch, informed us that migratory birds are particularly fond of stopping to wash and refresh themselves at it; and in evidence of the way it is appreciated, it need only be mentioned that he has caught pied, grey, and yellow Wagtails whilst they have been running about on its pebbly banks in a single season.

WILD CHAFFINCH STUDYING BIRD-CATCHER'S DUMMY.

He used to catch Nightingales in his garden in great numbers by means of a trap baited with mealworms. One of our illustrations on page 293 represents the engine set ready to receive a visitor. Directly the unwary bird hops on to the raised, circular kind of perch in the centre, with a view to devouring the tempting grubs within it, he releases a spring, which swiftly carries a net over him and renders his chances of escape exceedingly small, as a reference to our second picture of a similar trap with a Robin in it will show. Although not exactly the same kind of trap, it works on the



CATCHING CHAFFINCHES.

same principle, and is exceedingly effective amongst the members of some species when baited with what they like. Redbreasts and Hedge Sparrows are easily caught with it in winter-time, but its temptations are seldom great enough to overcome the sagacity of a House Sparrow.

Such is the rush of Nightingales southwards between the last week in July and the last week in August that our friend says he could easily catch a hundred specimens in his hand-breadth of garden alone.

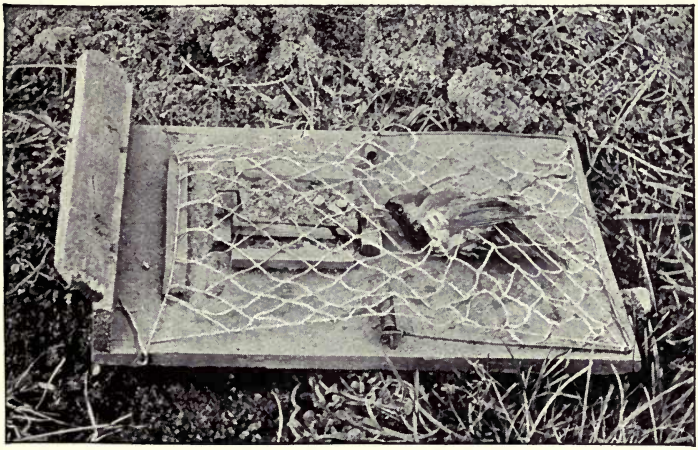
On one occasion he secured as many as seventeen Redstarts in a single morning, which is an astonishing performance when it is taken into consideration that it occurred in the early spring.

It is an interesting fact that there is nearly always a morning, during the first or second week in May, when every garden in and around Brighton swarms with newly-arrived migrants, such as Whitethroats, Nightingales, Lesser Whitethroats, Redstarts, and Willow Wrens. No sooner, however, have the little travellers rested themselves than they are off again, and next morning there is not one of them to be seen.

As an instance of the dangers encountered by some of our summer visitors in journeying back to their old haunts, Booth mentions that Whitethroats in crossing the Channel—when flying low to avoid the full force of a fresh north-westerly wind—are often struck down by the spray from a wave breaking just ahead of them, and drowned.

It is strange to note how much a bird may modify its habits in a journey of only two or three hundred miles. Having been familiar with the Ring Ouzel and its shy habits nearly all my life in the mountain regions of the North, I was

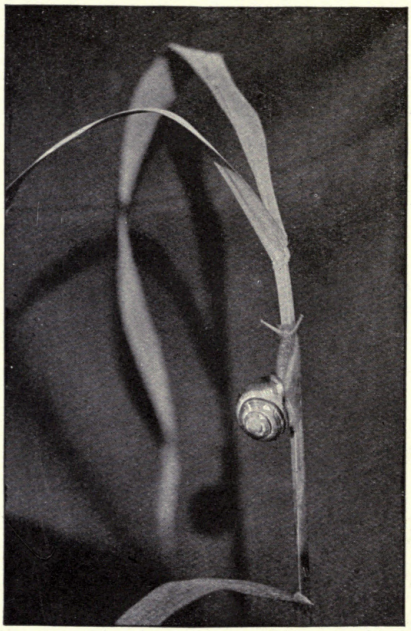
NIGHTINGALE TRAP.



ROBIN IN BIRD TRAP.

astonished to find that, when journeying south in the autumn, the bird has, by the time it reaches Brighton, become so bold that it visits streets almost in the heart of the town in order to feed off elderberries and rowans overhanging the pavements.

Birdcatching on the Sussex Downs appears to be an inherited kind of instinct amongst some families, whose members have followed the sport for generations.



SNAIL ON GRASS-STEM.

CHAPTER IX.

THE ART OF DUCK-DECOYING.

OF all the contrivances invented by the ingenuity of man for the capture of wildfowl, I think a Duck decoy is at once the most interesting and the most deadly. The first one made, and worked by enticing the birds into it, in this country was, it is believed, that constructed by Charles II. in St. James's Park.

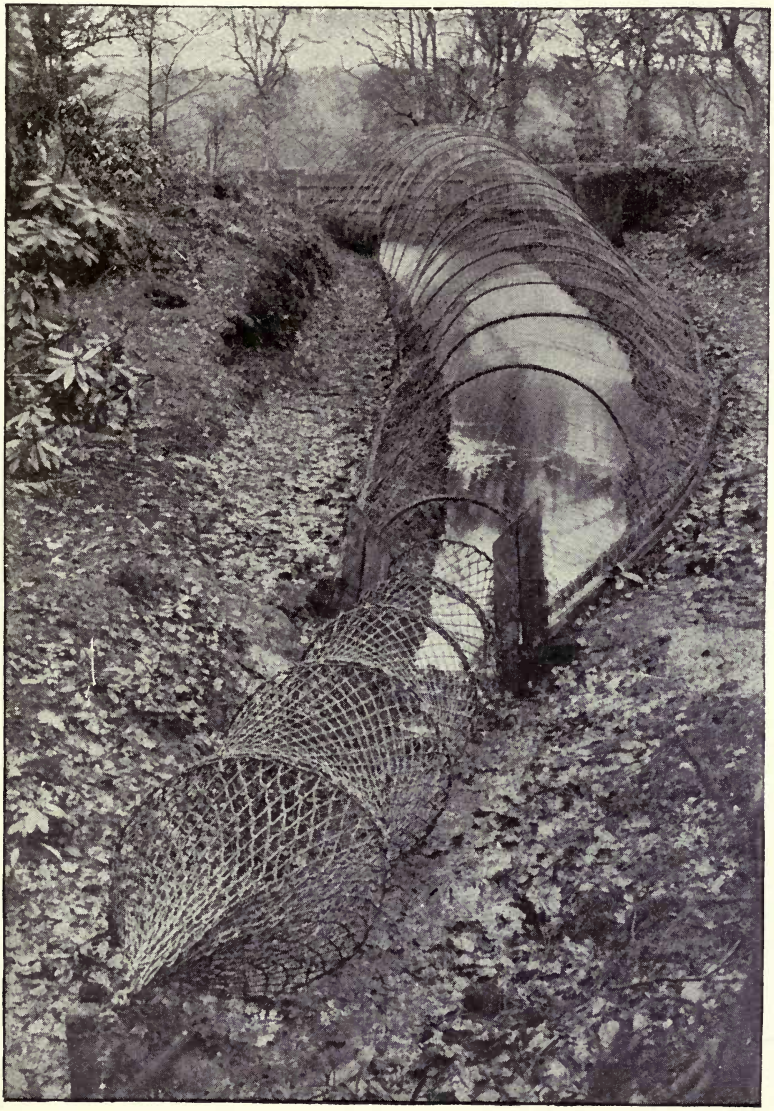
Some idea may be gathered of the effective nature of this engine of destruction when it is mentioned that about a century ago no less than 31,000 wildfowl of various species were taken in a single season by ten Lincolnshire decoys.

The precision of modern firearms and the great increase of gunners of all kinds have almost reduced decoying to a lost art. However, there are still a few pipes, as the contrivances are called, worked in different parts of the country; and the man who looks after those I am about to describe—three in number—succeeded last winter in killing 1,500 head of wildfowl, despite the fact that he was not working upon an ideal piece of water, and was continually harassed by a number of flight shooters, who waited for his birds in some adjoining property, over which he had no control, and blazed off at them almost every morning and evening, as they came in from and left again for the mud flats by the sea.

Successful Duck-decoying can only be carried on by the fortunate combination of several important essentials. (1) Perfect quietness upon the body of water, large or small, to which the birds come to spend the day. (2) A good set of well-kept pipes, each trending to a cardinal point of the compass, for it is absolutely necessary when a pipe is worked that the wind shall be blowing from the tail of it; for Ducks always swim and fly with their heads to the wind. The pipes are, for this reason, named from the direction in which they point. (3) A well-trained, intelligent dog of small size, quick action, and silent habits. If it resembles a fox in colour so much the better, but this qualification is not now considered so essential as it was in olden times, when the decoy-men attached so much importance to it that they tied the skin of a fox on to a dog's back, and allowed the brush to trail upon the ground. (4) A number of well-trained lure Ducks that will come to the decoy-man's whistle or the sight of his dog, and swim steadily up the pipe; and last, and most important of all, a man of more than average industry, intelligence, and skill.

In order to make this chapter as complete as possible, from a pictorial point of view, we journeyed twice to East Anglia; once, when the wild-fowl were being actually caught, and it was impossible for us to photograph the mouth of the pipe without frightening the fowl away; and again in summer-time, when we could go anywhere without fear of doing harm.

A decoy pipe is a ditch shaped somewhat like a cow's horn or an ear trumpet, and is sufficiently curved to make it quite impossible for anything going on at one end to be seen from the other. It is about one hundred and fifty feet in length,



DECOY PIPE FROM TAIL END.

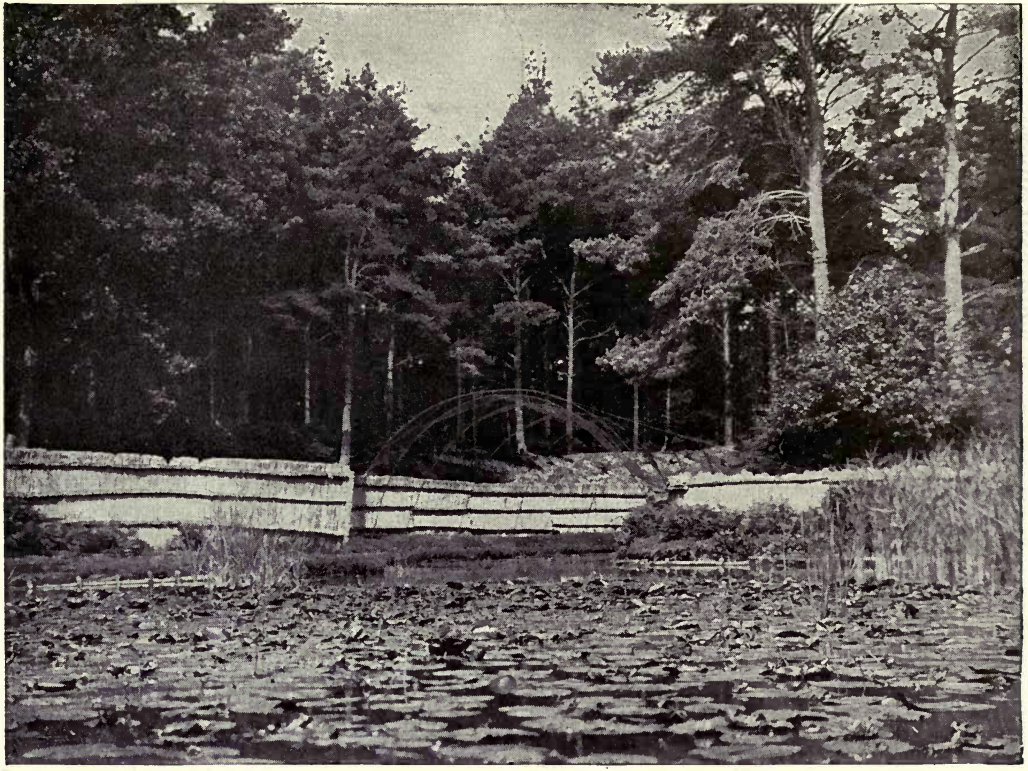
seventeen or eighteen feet wide at its mouth, and gradually tapering to a couple of feet at its tail. The water in it is about fifteen inches deep at the wide end, and three or four at the narrow one. If a spring or small stream should empty its waters into the pipe, it is considered an advantage, as wild-fowl swim better against a slight current.

The pipe is covered by iron hoops, commencing at the mouth with one having a span of from twenty-five to thirty feet, and a height, from the centre of the arch to the water, of something like fifteen feet; the hoops gradually diminishing in size as they approach the tail of the pipe to about two feet in diameter. The whole is covered by a hand-spun hemp net, with a two-inch mesh, well coated with tar and tan. I was assured by the decoy-man that one of these nets will last twenty years. Some pipes are covered by a four-inch mesh at the mouth, and for some distance down, and then one of half the diameter.

One decoy we examined was covered with galvanised wire, which had been treated in the same way as a hemp net. Some decoy-men have an objection to wire netting, on account of its tendency to hum in a breeze of wind, and thus frighten the Ducks away; however, the man we visited experienced no difficulty of this kind.

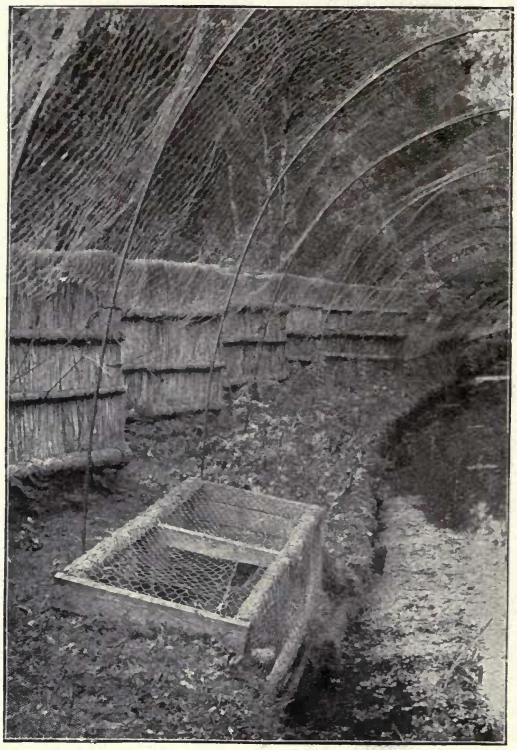
At the tail of the decoy pipe is a detachable net from twelve to fifteen feet long, held open by hoops two feet in diameter, and lying on the ground. In some cases a kind of hopper is made close by the end of the receiving net, to throw the dead fowl into.

On either side of the mouth of the pipe the banks slope gently down to the water's edge, and are flat and roomy, especially on the side where



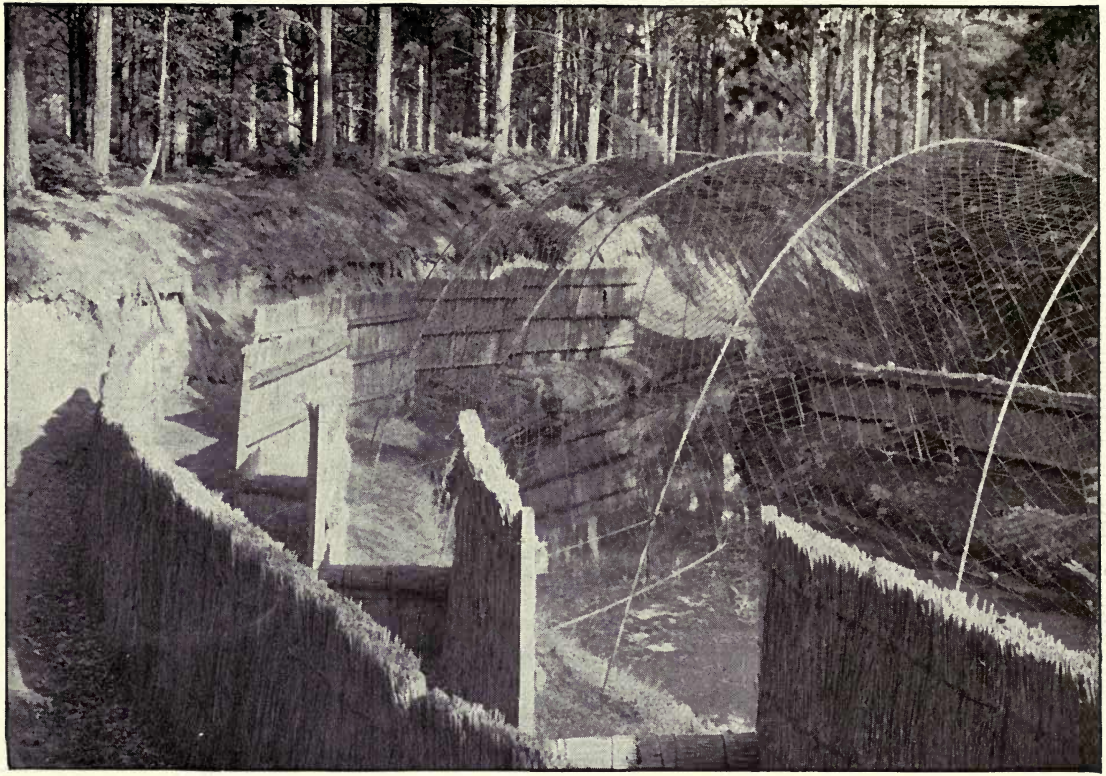
ENTRANCE TO DECOY PIPE.

the sunshine falls, in order that Ducks may land to preen themselves and sleep thereon. These banks extend for more than half way up the pipe, gradually narrowing as they do so, until they vanish altogether, and the hoops and netting come close down to the water's edge. On the screen side, or left bank from the entrance, and about one-third of the distance in, we found a wire cage let into the bank containing a couple of lure Ducks; but this is a dodge, I believe, peculiar to the man whose pipes we visited. No leaves or twigs are allowed to accumulate upon the pipe, and over-hanging branches or shrubs, calculated to darken any part of it, would be instantly lopped off.



CAGE FOR DECOY DUCKS.

On the left hand side from the entrance is a double row of reed screens, about five feet in height, running parallel with the pipe for something like two-thirds of its length. The outer



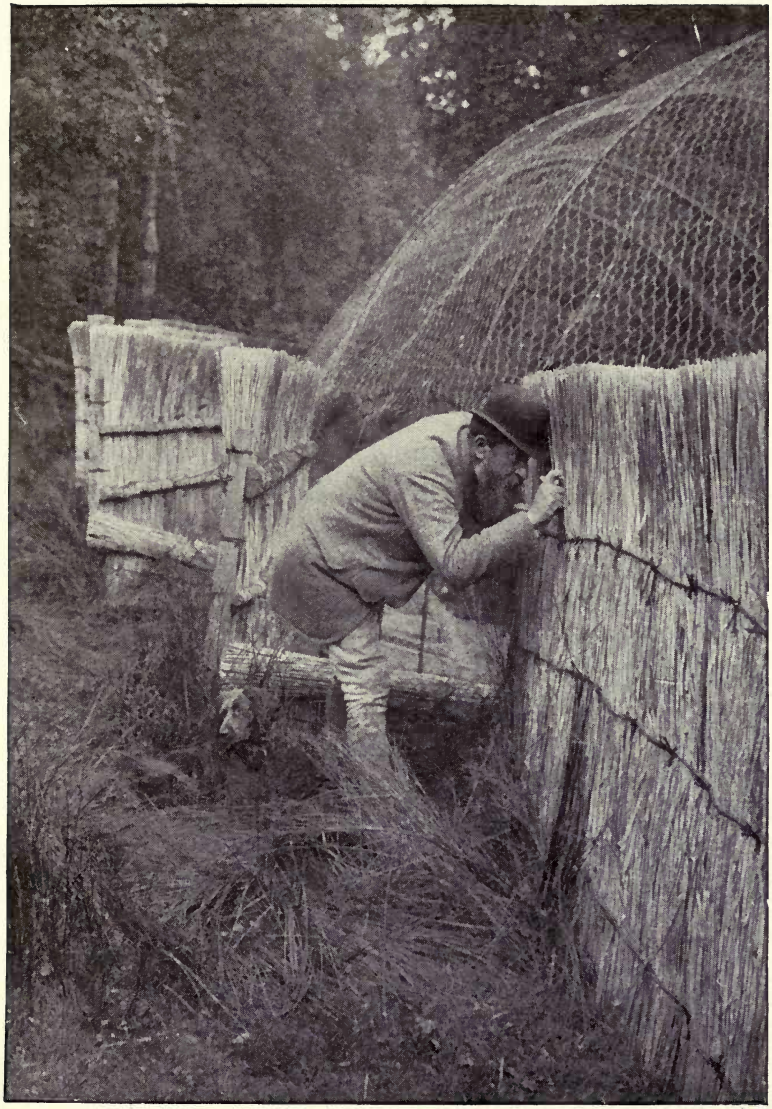
ZIGZAG SCREEN. DUCK DECOY.

is a plain one, with gaps in it here and there for the convenience of the decoy-man upon entering to examine the pipe. The inner screen consists of a series of pieces arranged, as shown on page 301, in such a manner that the decoy-man can see down towards the tail of the pipe without being seen himself by any fowl coming into it or outside upon the lake. Between each piece of this zigzag screen is a small one running at right angles for the decoy dog to jump over. It is about two feet in height.

PEEP-HOLE IN SCREEN.

A few yards in front of the mouth of the pipe is the head show place, where the decoy-man first shows his fear-inspiring form when the wildfowl are well within the pipe. A few yards further along on the same side is a cunningly devised hole for the dog to creep through when the luring commences.

Behind the two screens there is a great bank of earth with trees and shrubs growing upon it, and in this is a dug-out path by which the decoy-man enters the grounds and takes his departure.



DECOY-MAN MAKING HIS SURVEY.

The screens are made of dead reeds, and are five or six inches thick. They are held close together by wooden rails or galvanised wire. The decoy-man told us that the latter is far better, as it does not collect and hold the water behind it, to rot the reeds, like a wooden rail.

Stuck through the inner or zigzag screens, commanding a good view of the pipe mouth and lake, are several dagger-like pieces of wood, a foot in length and an inch and a quarter wide, which, when turned on one side, open a small vertical slit in the reed screen, through which the decoy-man makes his survey.

All the paths are swept clear of twigs and leaves, and covered with a thick layer of sawdust, so that the decoy-man's footsteps may not be heard.

The lure Ducks that are at liberty in and around the mouth of the pipe number about twenty, and are very similar in appearance to Wild Duck. They are only fed in the evening, after the wild ones have left for the mud-flats, except at such times as when the decoy-man is at work catching fowl, when he flings bruised oats, buckwheat, maize, malt grains, or acorns into the pipe.

As soon as the lure Ducks hear the decoy-man's low whistle, or see his dog, they know there will be some grain floating down the pipe, and they swim up—the steadier the better, for these Ducks are so trained that as soon as the decoy-man appears at the head show place, and the wild birds rise and fly up the pipe, they quietly swim down again towards the lake.

Wildfowl are taken between October and March; and during a hard frost the decoy-man puts on his sea-boots at midnight, and, taking a long-handled

axe and boat-hook, cuts up the ice round the mouth of the pipe, and thrusts it beneath that formed upon the lake. It is a great point in successful wildfowling to keep the water in the pipe, and for some distance around its mouth, free from ice, as such birds as frequent the lake during open weather bring a lot of strangers back with them on their flights to the coast during a snap of hard frost.

Many decoy-men are too anxious to begin to kill the wildfowl directly they visit their water. It is a great mistake, because, if they kill them nearly all at the beginning, the few remaining birds do not induce many strangers to fly back with them from the mud-flats in the morning. Ducks fresh from the sea are known by a mark upon their breasts, left by the salt water, but this quickly disappears when they frequent fresh water.

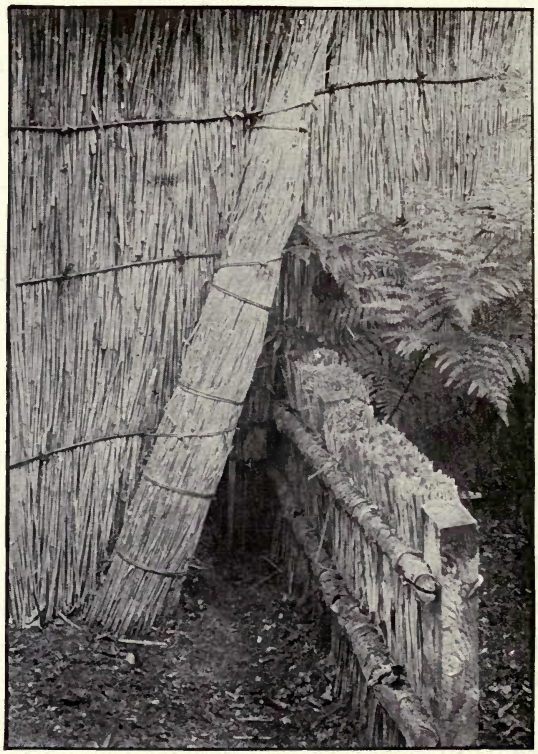
As wildfowl are very acute of scent, a piece of burning turf is taken by the decoy-man when he goes after Duck, in order to counteract the smell of his breath or clothes. This strange proceeding, according to Sir Ralph Payne Gallwey, had its origin in the fact that "in the fens of Lincolnshire turf was largely burnt before coal came into use, and it was supposed that the wildfowl, being accustomed to its smell, did not mind it, whereas they would that of the decoy-man."

I will now endeavour to describe how the actual work of taking wildfowl is done.

We trooped silently down the sunken path leading from a track near the decoy-man's cottage in the wood to the pipes. He led the way with a piece of burning turf in his left hand, and his little liver-coloured bitch close at his heels. When we reached the screens, he placed his piece of

turf upon the ground, and, gently twisting one of the dagger-like sticks from the vertical to the horizontal, peeped through the slit in the reeds, and beckoned us to come and look.

Some two hundred head of wildfowl were to



DOG'S HOLE. (*See p.* 302.)

be seen: a few upon the far bank, at the mouth of the pipe, and in the open water in front of it, but the great majority on the ice beyond. Those nearest the pipe appeared to be full of attention and alertness, whilst those further out were either preening themselves or sleeping peacefully. In some places they were collected in dark groups,

DECOY-MAN KILLING WILD DUCK.

and in others they were scattered pretty generally over the ice.

The decoy-man quickly twisted the stick back to its original position, and the peep-hole instantly closed. Creeping stealthily forward, he gave his dog a piece of bread, and sent it through the hole in the reed screen, beyond the head show place, and glided swiftly and silently back. The dog and he appeared to meet at the head show place at the same moment. It jumped over, and, taking a piece of bread from its master's hand, jumped back again, and directly afterwards appeared at the next opening, between the zigzag screens. After this performance had been repeated several times, and the decoy-man had thrown sundry handfuls of grain from his jacket pocket into the pipe, he stopped and peeped through one of the screens. A number of wildfowl had followed his dog out of curiosity, or his lure birds after the grain, and, darting through a gap in the outer screen, he ran back at great speed to the head show place, and frantically waved a large red cotton handkerchief. There was instantly a great splatter and commotion, and the decoy-man raced like mad from one show place to another, giving his handkerchief a flick at each as he passed.

The poor Ducks flew straight on, heads to wind, no doubt thinking that just round the bend in the little creek was an open glade in the woodland leading to freedom and safety, but, alas! the fatal pipe narrowed, and the much-dreaded man followed, with his waving sheet of flaming red; there was no retreat, and on they went pell-mell, frantically hustling each other to get through the little hole at the end—to find themselves in a treacherous *cul-de-sac.*

We all ran at the top of our speed along the sawdust path to the detachable net at the end of the pipe, where we found six Wild Ducks tearing up and down in the greatest fear and consternation. One old Mallard had struck his head against an iron hoop supporting the wire netting over the decoy pipe, and was lying flat on his back in the last throes of death.

The decoy-man quickly detached the receiving net, and, taking the wildfowl out one by one, dislocated their necks by a dexterous turn of his wrist.

He was distinctly a man of notions, for he told us that he had invented a method for making up for his decline in speed (the result of thirty years' hard wear and tear at the pipes and gamekeeping) when running from one show place to another along the side of the pipe. He had fixed a red handkerchief on a stick at the next show place to the head one, so that directly he frightened the birds by his appearance he could pull a string and hoist it, and thus prevent any wildfowl in the pipe from turning round and flying back before he reached the place. He also told us that he sometimes uses a tethered lure Duck at the mouth of the pipe, and has an idea that, if a long, narrow mirror were hung across the decoy at a certain height above the water, the birds outside, seeing themselves in it, would swim up, thinking that their reflections represented other and bolder members of their species.

He was, in addition to being a skilled hand at the pipes, a most kindly, good-natured fellow. One morning we visited his cottage at six o'clock, and found him bustling about and feeding some poor old wayfarer, who had dropped in to see him, with

liberal supplies of rum and milk and cake. The old fellow, who evidently belonged to the neighbourhood, told us that he remembered the time when smugglers used to hide their contraband goods in the middle of the wood we were then in. One Sunday morning, whilst out for a stroll, he came upon a man guarding a cargo of spirits which was to be taken further inland, and the smuggler begged of him not to inform the authorities.

"Did he give you any, bor?" inquired the decoy-man laughingly.

"That he did," answered the old man; "an' I didn't tell on him naythe r."

WILD DUCK ON HER NEST.

CHAPTER X.

PEOPLE WE HAVE MET.

OUR travels up and down the British Isles have naturally thrown us amongst curious characters of all classes, and it is my intention to relate in this chapter something of our doings with the most interesting of them.

In the late spring of 1895 my brother and I left Oban in a steamer plying amongst the Western Isles of Scotland. The passengers we met on board were of a rather mixed order—tourists, missionaries, Highland servants of both sexes on their way to or from engagements, commercial travellers, pedlars, and migrants.

One hearty old Highland woman and her buxom daughter were moving to the bleak and lonely Isle of Rum, with their few sticks of household furniture, a cow, yearling calf, and half a dozen domestic fowls. The cow had not been milked the morning she was put on board, and as the day wore on the poor creature's udder became distended, and she lowed as cows will under similar circumstances for relief. I noted this, and asked the owner's daughter whether I might milk the animal. At this she laughed until the tears shone upon her brown healthy-looking cheeks. The mere incongruity of a Heeland coo being milked by what she no doubt took to be a Cockney tourist, struck

her as being altogether too funny for resistance. A great hulking Highland lad, with a red head and a supercilious affectation of wisdom on his countenance, had a deal to say, mostly in Gaelic, upon the matter; and just to see how far he would allow his assumption of knowledge to get the upper hand of his native caution, I offered to wager him a shilling that I would milk the cow dry inside of ten minutes. Although the stake was small, his discretion saved him. The old woman to whom the cow belonged readily gave her assent, and borrowing a bucket from the chief steward, I sat down to my task. Some of my fellow-passengers looked on in amused curiosity, no doubt expecting to see me sent sprawling along the cargo deck by the resentful cow, whilst others of the superior order appeared shocked, but I didn't mind as long as there was some fun and good new milk to be got out of the transaction, besides relieving a suffering dumb animal. When I started to milk, the cow turned her head and looked at me in great amazement. She sniffed the scent upon my clothes, and rolled up the whites of her eyes in such a wicked way as made it quite plain to me that under different conditions she would not, without effective protest, have suffered the indignity of being milked by a man who carried not the aroma of peat smoke about him. I milked the flood of thin milk away into the bucket, and, calling for a drinking glass, drew the rich remainder for a Highland railway manager, a missionary, my brother, and myself. This piece of practical sagacity, proving that I knew a cow's richest milk is always given last, raised the red-headed Highlander's opinion of me considerably.

Whether the old woman regarded me as an eligible suitor for the hand of her daughter I know not; but be this as it may, the old lady fell greatly in love with me, and I was afraid lest she might want to kiss me before she left the ship in a little bay running into the rugged sides of Rum. Anyway, I breathed more freely when she was seated in the boat along with her daughter waving tender farewells to me with a white handkerchief as the distance grew greater between us.

When we reached a famous bird-island a little farther to the north, we found the proprietor on it collecting his rents from the crofters. This was an unfortunate thing for us, for in addition to an eccentric notion as to the absoluteness of a man's sway over what he owns, the old gentleman had been shamefully duped by some professional egg-collector not long before the date of our visit. We presented our credentials, but he only laughed at us, and regarded us as a couple of fools for coming so far for photographs of birds' nests *in situ* when we might have gone to South Kensington Natural History Museum and got pictures of "nests, eggs, old birds and all."

I wheedled and coaxed, but to no purpose; he absolutely declined to allow us to take a single photograph on the barren, dreary looking place. I will give him his due, however; he was quite affable, and when he found out that I knew something about sheep, he chatted freely about the price of wethers and other ovine matters, as we sat together in the sunshine on a little garden-seat in front of the hotel at which we were staying. Presently he closed his eyes and dozed off to sleep, his fine old head bobbing back and

forth in the most comical fashion for lack of a rest. Just at the moment I espied five men repointing the gable end of a building a little distance away. Two of them were working on a scaffold, and the remaining three standing on the ground calmly surveying their progress. I drew my brother's attention to them, and remarked, "It takes two Highlanders to do a piece of work, and three to look on." This observation electrified the slumberer, whose head had given such a violent backward bob as to awake him, and, jumping to his feet, he exclaimed with a snort "The devil! and at my expense too."

He descended upon the men in a fair whirlwind of passion, and I can vouch for it that they honestly earned their money for the rest of that day.

After this little episode his heart softened slightly towards us, and he suggested that we might go and photograph some grotesque looking rocks which could be seen out at sea from where we stood in front of the hotel, as they had a somewhat peculiar geological history. We didn't care a brass farthing for the rocks or their history, but we understood the value of humouring an old man in power, and promptly invested half-a-crown in the services of a very clumsy gillie, who nearly drowned us in a fierce tidal current. We landed on an island almost opposite the rocks, and walking over a rough promontory which bore pathetic signs of crofters' huts and wee patches of cultivated ground, long since abandoned to the inexorable forces of nature, arrived at a high cliff in the face of which was a great black cave.

Upon walking to the edge of the roof of this cave there was a great clatter of wings and a

hurrying stream of Shags and Rock Doves poured from its dark recesses. The former alighted upon the sea in the bay below and swam about close together, but the latter seemed to disappear entirely. I was somewhat surprised to see a Heron lazily flap its way out, but upon peeping over I discovered its nest and eggs situated on a jutting crag.

Whilst we were engaged in making photographs of the cave, our attention was attracted by a peculiar noise, which sounded something like a mixture of snorting, wheezing, and sighing away out seawards. Although curious, it was strangely familiar to me, and I suddenly remembered that I had heard the same weird maritime music before as I lay tossing one dark night at the bottom of a smack's boat in the middle of the North Sea. "A Whale!" I cried, and just then the monster rounded the end of the rocky promontory which we had just crossed. He came straight into the little bay, and afforded us one of the most curious sights it has ever been my good fortune to see. The Leviathan rose for breath right in the middle of the flock of Shags, and the birds churned the sea into a great white star of foam in their terrified haste to take wing and escape. The day being perfectly calm and our position right above them, the clatter of their wings and feet along the surface of the water until they gained the air was truly astonishing.

On our return to the hotel I reflected that we had come a long way, spent a lot of money, were within a walk of what we wanted, could do absolutely no harm in getting it, and resolved to resort to strategy in order to procure what we desired. I accordingly communicated my scheme

to my brother, and we arranged with a very intelligent fellow who knew the ground almost as well as the palm of his hand, to be ready to go out with us at two o'clock the following morning.

We did not go to bed that night, although we retired to our room, and just after 1 a.m. we stole forth from the hotel, boots in hand, so as not to disturb the slumbers of our fellow sojourners by any undue clatter in the stone flagged hall. Our guide joined us at the very tick of the appointed hour, and together we trudged for three or four miles in the still strong morning air across a piece of country thickly clothed with heather, long coarse grass and rushes, and profusely dotted with innumerable small lochs and bogs.

By-and-by we came upon a Red-Throated Diver sitting upon her nest, which was situated on a wee island of peat standing right in the centre of a little tarn. I detected the bird through my binoculars and watched her slip quietly away upon our approach. The tarn was far too deep to wade, but my brother would have swum across to the island had we had a rope on which we could have sent his camera across to him as we have since done under similar circumstances.

Whilst examining the shores of another small island in a large loch with my field-glasses, I had the good fortune to see a Shelduck leave her nesting burrow—a habit practised by these birds in the very early hours of the morning.

We found the water lying between the shore of the loch and the island comparatively shallow, so waded over to examine the Shelduck's nesting

HEBRIDEAN PEAT DIGGERS.

hole. No sooner had we reached our goal than there was a tremendous fluttering commotion amongst the hip-deep heather clothing the island, and a couple of Wild Geese splashed into the loch and paddled away out to a safe distance. We found three of their young ones about a week old, and after a deal of trouble succeeded in making a photograph of them.

We saw several pairs of Richardson's Skuas and Red-Throated Divers, and succeeded in finding and photographing a nest and egg belonging to the latter species, but the former defied our best efforts.

Between four and five o'clock our guide's courage suddenly evaporated as he remembered that there had come to reign over that particular beat a king arrayed in velveteen who knew not Joseph. This was rather awkward, so we sat down to breakfast and a little reflection on the side of a rough turnpike.

A teetotaler is a real *rara avis* in those parts, and my brother and I came off rather badly at times in regard to liquids. This may be judged from the fact that one of the serving girls at the hotel did not even know what lemonade was, and there was not a drop in the place. Our "peculiarity" was a lucky thing for our guide, from his point of view, because it made him heir to three shares of "mountain dew" packed away carefully by our thoughtful landlady.

When we had finished breakfast, I said to the man, "Now, I don't want to get you into any trouble at all, so just sit where you are whilst my brother and I hunt for nests; and if you see anybody coming, give us a warning whistle, and we'll retreat." He assented, and we proceeded to

hunt for the nest of a Richardson's Skua. Presently he arose from his seat upon the side of the turnpike, and came running towards us at a rare pace. I was curious to know what was the matter, and speedily discovered that the liquor had warmed his heart to such an extent that he was bubbling over with Dutch courage, and quite ready to defy a whole regiment of game-keepers.

We were back in the hotel by six o'clock

CROFTER'S HUT, OUTER HEBRIDES.

with pictures of the nest, eggs, or young of four additional species to our collection; and our guide's fortune was greater than that of the Yorkshireman who met a friend and gladdened him with the information, "Ay, lad, but I had a grand day on't. I were drunk by ten o'clock i' t' mornin'."

In the afternoon, whilst out for a stroll on an inhabited part of the island, we came upon two old men cutting peats. We got into conversation with them, and I volunteered to take a hand with the spade. The one who was using it good-naturedly complied with my request, and it was quite ludicrous to see the pair of them stand agape with astonishment at the skill with which a mere English tourist could handle the tool.

We succeeded in inducing them to allow us to take a photograph of them at work.

During the winter-time the Atlantic Ocean casts ashore on this island some very useful flotsam and jetsam, which is highly appreciated by these poor crofters, whose lives may not inaptly be described as prolonged periods of monotonous hunger and ease. Last winter the harvest of the sea was a scanty one, and the Elders of the Free Kirk, thinking that they had not been enjoying a fair share of good things from the bountiful deep, offered up some heartfelt prayers that they "would pe plessed wis a wreck, put no man's lives to pe drowned."

We were anxious to visit the Shiant Islands, a famous group of sea-bird breeding rocks situated in the North Minch, not far from Tarbert Harris; and as our time was very limited we tried to secure a boat and crew to take us off at night, in order that we might make some photographic studies in the early hours of the morning, and then lie by and let the mail boat for the South pick us up at sea. We experienced great difficulty in finding out anybody who could give us such information as would help us in getting a crew together, owing to the fact that nearly all the male members of the population were away at sea, fishing. We were at length directed to a man who was engaged in digging peats between two huge lumps of rock away up a steep hillside. I explained to him what we wanted, and said that I was prepared to pay for night-work double the amount usually charged by a crew for taking visitors off to the islands during the daytime. He listened with the intent curiosity of a man to whom learning something of other folks' business is a real pleasure, but when I asked him what he thought the charge

would be, he somewhat astonished me by the following curious answer: "I ken weel what I would do it for mysel', but I'm no going to tell ye."

We had met many a cautious Scot before, but a frank avowal of our business invariably secured his best advice and kindly assistance. This man's caution, however, was unconquerable, so we left him and went into a crofter's hut not far away, and watched a woman weaving Harris tweed. The room was chock-full of smoke, and we came out of it with smarting eyes and the aroma of peat reek strong upon our garments.

In returning to the hotel we met a man and his wife leaving Tarbert Harris. The latter had a bonnet on, which, for downright warmth of colour, would have shamed a Hyde Park geranium bed in July, and her husband, a little squat man with dark twinkling eyes, was carrying her boots, tied by the laces round his neck and dangling on his broad breast like tokens of distinction.

We hunted for half a day after birds' nests amongst the dreary waste of grey rocks on either hand of Tarbert Harris, but found far more empty whisky bottles than birds' eggs.

When we got back to Oban we hired a boatman to take us out to some small rocky islands in the Firth of Lorne. The day turned out to be dead calm, with not a ripple on the sea and an almost tropical sun blazing overhead. We helped Donald to pull his great lumbering sailing craft, which was three times too large and heavy for the weather and the occasion, out to the islands, and when we landed on the one he judged best for our purpose we certainly found it rich in bird-life. After we had clambered all over the place and photographed several nests, we sat down to lunch, half dead with

thirst and fatigue. To our unutterable dismay, the packer of our luncheon basket had forgotten to put us up a drop of anything to drink.

"What! naething to drink?" says Donald.

"Not a drop," says I.

Poor fellow! it was only by a tremendous effort he survived the calamity.

"Is there any water on the island?" I inquired.

"Oo ay, I ken a place where maybe there'll be a wee drap, I'm thinking; but watter's watter, after a', sir," he added sadly and significantly.

We found the "drap" under a huge crag, warm, brown in colour, and of peaty aroma. It had plenty of birds' feathers in it, showing that it was a place where they came to bathe; however, I tried it. The endeavour was vain; it simply would not go down. My brother declined altogether to try it, but not so Donald; he went down on his knees, and for a while there was a sound as of many waters rushing through a confined space. When he arose, he wiped his mouth with the back of his great brown hand, and, looking at us with considerable disdain, remarked—"Ah weel, I say the mon who canna drink that is no dry."

Late one evening in June, 1895, we found ourselves at Girvan, on the Ayrshire coast, and directly opposite Ailsa Craig, to which we were anxious to pay a flying visit, and get away South by a train leaving Girvan about twelve o'clock the following day. We discovered that the "awesome rock" was rented by two brothers, curiously enough named Girvan, one of whom lived on it, and the other in the town; the former showing visitors over the rock, and the latter conveying them forth and back in a small steamboat. I hunted this worthy man out, and told him that we wanted to run over

to the Craig very early in the morning. With a little gush of that kind of natural amiability one meets with in men anxious to do business pleasantly, he gave himself away, and said:

"I'll just take ye ower at anny time ye like, sir."

My reply staggered him visibly.

"You are the sort of man for my money. We'll start at two o'clock in the morning," I exclaimed.

"Oh, that's varry 'arly!" he ejaculated. "I canna mak' steam much before that 'oor, even if I sit up the neet."

I was anxious to maintain the advantage I had gained by his unguarded offer, so pointed out that he would get back in such good time as to enable him to sleep all the afternoon. He finally assented, and, setting to work, got up steam by the appointed hour, and we crept out of the harbour and away across the nine or ten miles of choppy sea dividing us from the great weird pillar of rock standing high, gaunt, and grey out of the ocean.

We all had breakfast with the Craig Girvan, and greatly enjoyed his fried Guillemots' eggs, bread and butter, and large cups of tea, mollified by liberal quantities of rich goat's milk.

We ascended the great crag under the guidance of the brother who lives upon it. He seemed very doubtful about my ability to visit the ledges whereon the Gannets breed, but when I convinced him of my determination to do what he or anybody else did, he led the way upwards, and, by way of making me feel the hazardousness of the undertaking, he pointed out one place where he had himself sustained a fall that had, according to his own account, broken well nigh the majority of the bones within his body, and another where a nephew of his had been killed outright.

After we had taken a number of photographs on the very brink of an awful cliff, whilst poor old Girvan sat on the steep hillside above, and swore by all the saints in the calendar he would never get us off the Craig alive, we descended to the landing place again, much to the good-natured old man's delight.

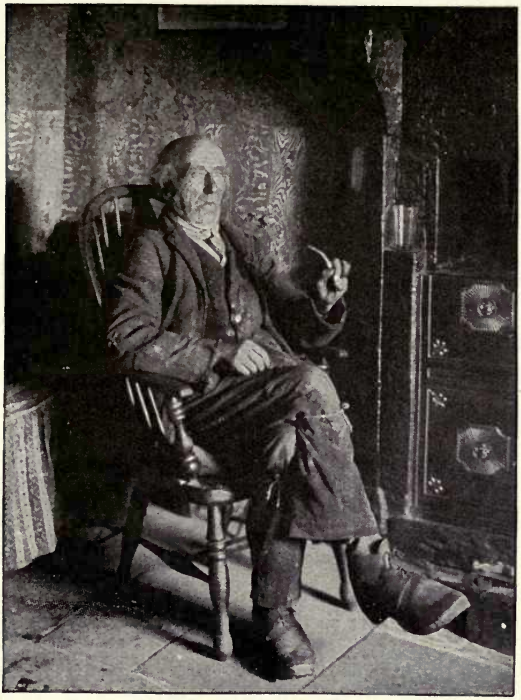
When we got down to the safety of a fairly wide goats' track he became quite jolly, and turning to my brother with a great air of mock sincerity, he said: "Mr. Keeaarton, I have a verry perteekilar request to make."

"What's that?" my brother inquired.

"If you take my photograph, for goodness sake dinna promise to send me one; then it may come. I have had scores of amateur photographers on the Craigs, including many meenisters, and most of them have taken my likeness and promised to send me a copy, but never a one has reached me."

We had not much time to catch the train for home, and I urged the Girvan Girvan to put on all steam. This the obliging man did until his little craft shook and trembled from stem to stern like a thing stricken with palsy under the vibration of her machinery, some of which became so overheated with friction that it was necessary to keep it cool by allowing bucketfuls of sea water to trickle over it from a hole punched in the bottom of a large zinc pail.

For purposes of communication with one another these two brothers keep a number of homing pigeons. Some time ago the one living on the Craig had a child taken seriously ill, and sent a message for a doctor, whom his brother promptly took across in the little steam launch which conveyed us over. The doctor found the child very



LANDLORD OF THE HIGHEST INN IN ENGLAND.

THE HIGHEST INN IN ENGLAND.

much in need of medicine, but the wind and sea were rising to such an alarming extent, in addition to the fact that night was coming on, that there was no hope of sending any over that day. The little sufferer's father was, however, equal to the emergency, and suggested that one of his homing pigeons should be taken from the loft and the medicine made up in the form of a powder attached to its tail. This was done, and in a little while the anxious parents had the satisfaction of seeing the faithful bird drop from the clouds with the much-needed physic, which, it is pleasant to relate, saved their child's life.

We have met many people who entertained very curious notions in regard to the possibilities of the camera. My brother one day photographed a man who had done us some trifling service, and when he sent him the picture, it elicited the information that his wife liked it very much indeed, and had authorised him to say that she would be happy to pay a moderate price for three more prints, provided my brother would turn down the too much upturned trousers legs of her spouse.

During our travels we have generally met with considerable difficulty in obtaining anything like up-to-date intelligence of the bird-life of a locality.

The following verbatim report of a conversation which took place between myself and a farm lad I met one day in a Hertfordshire lane illustrates in an admirable manner the want of definite notions in the rural mind about such important things as time and space.

"Have you heard any hooting owls about here, young man?"

"Oh yes!"

"Where?"

"Just over in that there wood," pointing to a little copse not far away.

"Lately?"

"Oh yes!"

"Well, how lately?"

"Oh, a matter o' two year ago."

Whilst searching for materials on the hills dividing Yorkshire from Westmorland in the neighbourhood of Shunnerfell and Nine Standards we had occasion to stay for a little time at Tan Hill, the highest inn in England and the highest inhabited house in Yorkshire. It enjoys an elevation of 1,727 feet above sea-level and a corresponding degree of isolation. Some idea may be gathered of the distance it lies from "the busy haunts of man" when it is stated that during the summer months an eighteen-gallon cask of ale lasts a whole month, and in winter three. In fact, eleven consecutive weeks have sometimes passed without as much as the shadow of a stranger crossing the threshold.

The landlord, in spite of being an old man of between seventy and eighty years of age, all spent immured amongst the gloomy solitude of the lonely hills, was as merry as a schoolboy, and laughed at his own jokes until the tears ran down his wrinkled cheeks.

Although the Education Acts, the popular printing press, and the iron road have filled the remotest parts of our land with a hazy and belated knowledge of the wag of the world, it is surprising how utterly, and to me picturesquely, outside the pale of modern thought and feeling some of the sturdy old hillsmen of our country still remain. This old fellow went to Barnard Castle to see a solicitor about his licence, and couldn't tell the time upon

the town clock because "its hands pointed to one thing and it kept on striking and striking another every quarter of an 'oor"; and he saluted a girl who was washing the solicitor's office steps down with "Is thy faather in?"

He told us that he had once been summoned by the parish in which he lived to appear at York as a witness in a trial against a farmer for overstocking the moor with sheep. When the witnesses were about to enter the "justice room," one of them, on catching sight of the judge and advocates in their wigs and gowns, ran back to him in alarm and exclaimed "Ay, Poonder, I niver saw such a lot of grey-headed old men all together in my life! They must be older than Methuselah!"

During our stay an old farmer dropped in and ordered himself a glass of ale. In the course of conversation it fell out that he had been to London three times, and stayed for several days upon each occasion. I asked him how he liked the Metropolis. "Fine!" said he: "London's a grand spot to spend a holiday at, but I always took good care niver to be oot after dark."

In the summer of 1896 a pair of Barn Swallows made their nest and reared a brood of young in a fowl-house at the back of Tan Hill Inn, and the landlord told me he used to leave the door open every night for their convenience. I examined the old nest with a ladder, and calculated that, as the building was one of two floors, and it was nearly in the highest part of the roof, it must have been not less than 1,750 feet above the sea-level.

Last Whitsuntide my brother and I found ourselves in a remote Essex village, and, as we were unable to obtain any sort of inn accommodation, we stayed with a gamekeeper in his tiny, old-fashioned

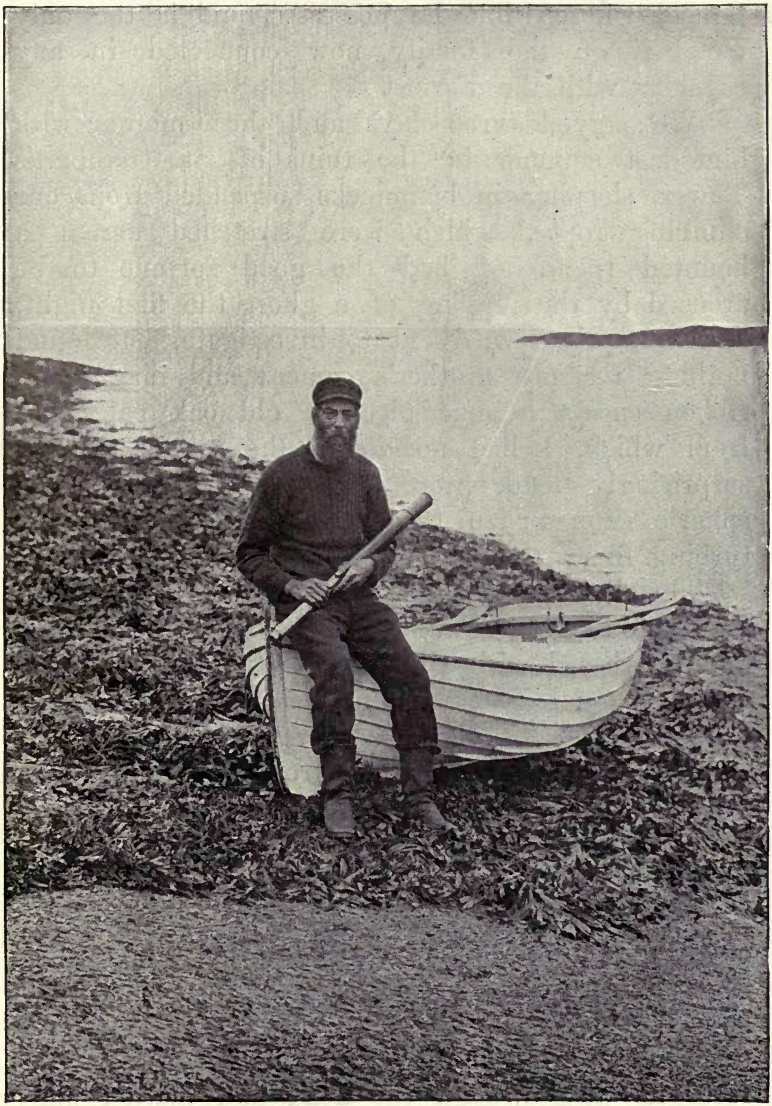
ESSEX GAMEKEEPER.

cottage. He was in many respects one of the most curious men with whom we have come in contact. Well-versed in everything pertaining to field-craft, slow and deliberate, but of the most set purpose and dogged determination, strong as an ox, and courageous as a lion, but withal tender-hearted to a degree.

When quite a small boy he was apprenticed to a gamekeeper who, though a strict disciplinarian where others were concerned, was totally unable to hold himself under control. He used to set his apprentice to mind young pheasants in the morning and, leaving him for the seductive conviviality of a neighbouring public-house, say—"If I'm not back by the time the so-and-so train passes this morning, you'll know I'm done for for the day, but don't you leave the birds." It was often one and two o'clock the following morning before the debauchee turned up again, and found his youthful apprentice crying, but resolutely sticking to his post, in spite of wind and rain and the terrible loneliness of his vigil-keeping.

Although, comparatively speaking, still only a young man, our friend's experiences throw a lurid light upon the dangers of his vocation. He has had his comrade shot dead beside him by a poacher in cold blood, has been deliberately shot himself by a member of the same fraternity, threatened with murder any number of times, and once or twice been thoroughly peppered with shot by accident.

We have several times visited the Farne Islands, and upon each occasion have received the most courteous and kindly attention from Robert Darling and his fellow-watchers, the brothers Patterson, who are employed by an association for the protection of the sea-birds breeding on this famous group of



GRACE DARLING'S NEPHEW ROBERT.

islands. Robert Darling is a nephew of the famous Grace, whose Bible he possesses, and is the only member of the family now connected in any capacity with the Farnes.

We stayed three days and three nights with him last summer in the ruins of St. Cuthbert's Tower, sleeping in hammocks suspended from our climbing ropes, which were stretched across a haunted room. I had the good fortune to be aroused by the tapping of a ghost the first night, and promptly turned out to investigate, but found nothing for my brother's camera and magnesium ribbon except a huge piece of old oak panelling, from which, I had no doubt, the sounds, though surprisingly loud, proceeded through some atmospheric change; so turned in again without disturbing him.

The lighthouse men keep a large number of tame rabbits, which wander all over the little island and interbreed with the wild ones. Whilst creeping up to get a nearer view of some bird, I was on several occasions startled by a black, white, or fawn-coloured bunny darting from the shelter of a boulder of rock or tuft of grass close beside me, and scampering away at the top of its speed either to the ruins of St. Cuthbert's Tower or to the Lighthouse itself. The keepers had taught one or two of them to run after pebbles, just like dogs.

The grass growing upon the Farne Island itself is coarse and poor, and as much of it is never touched by the rabbits, one year's growth has to force its way through the dead and matted mass of another, until the whole feels like walking on a huge fleece of wool.

The watchers keep a number of crab-pots constantly in the sea, whilst they are looking after

the birds, and we frequently enjoyed a fine crustacean for tea.

I have met people with an inclination to discount the feat of the heroine of the Longstone Lighthouse, but I have no sympathy with them; for after having rolled about the bottom of a boat like a live trout in a creel, and watched sea-water run almost continually off my brother's chin, as if it had been transformed into the spout of a tea kettle, in consequence of his refusal to keep his head below her weather gunwale and be made a prisoner beneath her if she succeeded in turning over, during half a gale of wind in those parts, I have nothing but admiration for the frail girl and her heroic deed. Long may her memory last!

THE LONGSTONE LIGHTHOUSE.

CHAPTER XI.

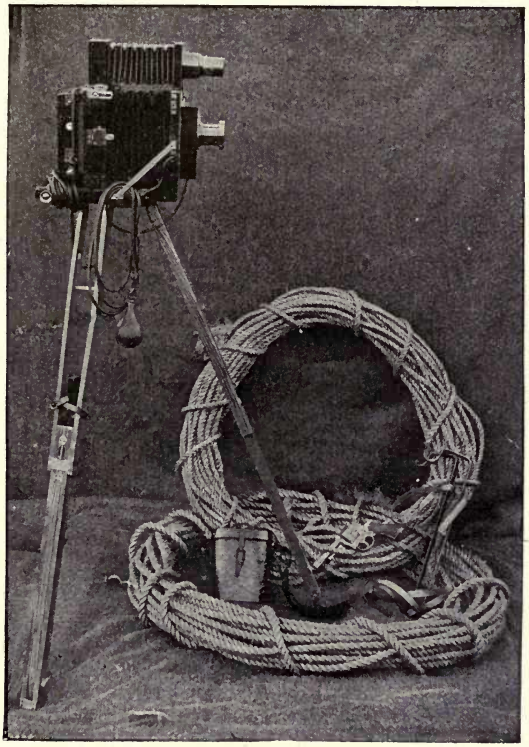
OUR METHODS OF PHOTOGRAPHY.

AS we are often asked how we obtain our pictures, and do not believe in withholding any information likely to be useful to those who desire to share in the fascinating pastime of making studies from the great Book of Nature, I propose in this chapter to tell how we do our field work.

The great points about successful natural history photography are: the possession of suitable apparatus to work with, an aptitude for taking care in stalking timid creatures, and plenty of patience and determination to wait for and get what is wanted in spite of obstacles.

The illustration on the following page shows our working plant. We take all our photographs with a half-plate camera. The one represented in the picture was specially built for us by Dallmeyer, and contains a pneumatically-worked silent shutter between the lens and the sensitised plate, in addition to a focal plane one, also worked by compressed air at the back. The adjustable miniature camera on the top is of the same focus as that beneath it, and is extremely useful in making pictures of flying birds or restless animals. When it is in use, the large camera is charged with a plate ready for exposure, and the photographer manipulates the focussing screw, which moves both in exact ratio

at the same time with one hand, whilst he holds the air-ball attached to the pneumatic tube in the other and presses directly a suitable opportunity presents itself. Our indiarubber tubing measures about one hundred feet in length, and is joined in



OUR OUTFIT.

five or six places by hollow pieces of metal, so that almost any length can be used, according to circumstances.

Our climbing ropes are two hundred feet each in length, and an inch and a half and two inches, respectively, in circumference. They were specially manufactured for us from the best Manilla hemp,

by Messrs. Galloway, Matthews & Co., of Appold Street, E.C. The thicker, or descending rope, has three loops at its end formed by plaiting the strands of which it is made, and then lashing them firmly to the rope above. These the climber puts round his hips as shown in our illustration of the method of descending a cliff, and practically sits in them.

METHOD OF DESCENDING A CLIFF.

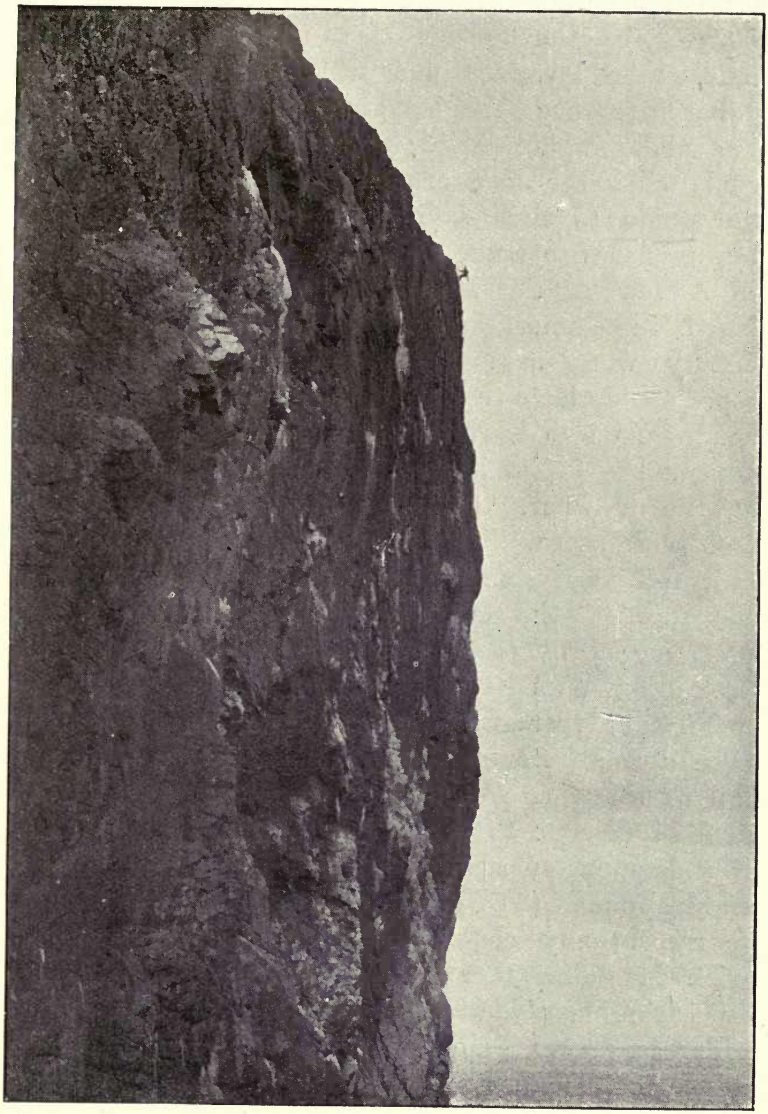
The revolver is used for the prosaic and harmless purpose of making a loud report at the top of any cliff in the face of which there is reason for believing some bird's nest, which we desire to photograph, is situated, so that by frightening its owner off we may locate the exact spot at which to make a descent. The climbing irons are very useful in ascending tall trees to examine the nests of such birds as build in elevated situations; but my brother, who is a good gymnast and can climb almost any sort of growing timber without assistance, has no great partiality for them. A good pair of field-glasses are indispensable, and more than double the pleasure and profit of a

YOUNG PEREGRINE FALCONS.

ramble along the countryside. I have a pair of Dollond's, which make me envied by every sea captain who has the good fortune to look through them. One clear day last summer Grace Darling's nephew said to me, as we stood at the foot of St. Cuthbert's Tower, on the Farne, "I can see the halliard rope swing from the Longstone Lighthouse flagstaff [which is two miles away] with your glasses, sir." I was incredulous, but this frame of mind soon turned to one of astonishment when I looked for myself and saw it bellying in the wind. We use a powerful bull's-eye lantern for discovering and focussing birds on their natural roosts during dark winter nights, and a small looking-glass with an adjustable handle for attaching to the end of a rod, or long stick, and examining the interiors of such nests as are situated on branches too slender to bear the weight of the climber.

Cliff photography, although really not very dangerous, is at first rather trying to the nerves, as I can testify from experience, having literally walked backwards—of course, with the ropes on—over the edge of a perpendicular precipice seventy feet deep, in order to be in a position to understand and appreciate the sensations of this branch of my brother's work.

Upon reaching a cliff which we desire to descend, and having located the exact position of the nest to be photographed, we drive a moderate-sized crowbar from twelve to eighteen inches into the ground at distances varying from four or five to ten or twelve feet away from its edge, according to circumstances, and sloping slightly out of the vertical in a backward direction. One end of the guide rope is tied securely round it close to



DESCENDING A BIG CLIFF.

the ground, and the rest flung over the cliff. The descending rope is now passed once round the crowbar, as near the bottom as possible, in order to reduce the leverage, and whilst the man who is going to manage the lowering takes charge of it, the photographer, with his camera lashed to his back, slips the loops round his hips, and seizing the guide rope in both hands to steady himself by, prepares to make a descent.

A few of the important points to be remembered in connection with this branch of natural history work are:—(1) To use good and reliable ropes, and have a thoroughly trustworthy, level-headed man to work them, as the chief source of danger lies in having a nervous or careless fellow at the crowbar. (2) To see that the last-named tool is driven well into solid ground. (3) To clear away all loose stones and pieces of rubble between the foot of the crowbar and the brink of the precipice about to be negotiated, for, should this precaution be neglected, the descending rope is sure to dislodge them when it is being hauled up; and even a small stone, with the velocity gained by a fall of thirty or forty feet upon it, can do a great deal of damage to the photographer or his camera, if it happens to strike either of them in its downward plunge. (4) Not to allow the descending rope to run in any cleft or crevice, as it may either stick fast altogether when being pulled up again or sustain considerable damage by chafing. In order to prevent either of these awkward eventualities, it is a good plan to run it through a piece of leather tubing over the edge of a cliff. When making a descent, I get into some position from which I can watch my brother's movements, and convey his requirements to the man at the

rope, either by word of mouth or by a simple prearranged code of signals when the distance is too great to make ourselves heard.

Two of the nastiest sensations connected with the work are stepping backwards over the brink of a very high cliff into space and spinning slowly round like a piece of meat on a roasting-jack, and watching the sea chase the land and the land chase the sea upon becoming insulated through the crags at the top overhanging. Most people in descending a cliff on ropes for the first time prefer, instead of keeping their feet against the rock-face and walking down, to scramble hands and knees against it; but the sharp projections play such havoc with skin and clothing that, if they have nerve enough to persevere in the recreation, they soon try a better way.

On arriving at a ledge with a nest upon it, my brother allows his body to assume a horizontal position almost at right angles to the line of the cliff, and placing the end of one leg of the tripod in a convenient crevice, and the other two through a belt or piece of rope round his waist, he focusses, and generally after a deal of trouble succeeds in making a picture. That of the young Peregrine Falcons on page 337 was obtained in this way.

Although not particularly dangerous, if carried out with care and proper tools, cliff work of any kind requires a man with a cool head and a strong athletic frame. Most of the danger, as I have already mentioned, comes from the attendant at the crowbar. On one occasion my brother had a very narrow escape from death owing to the fellow who was lowering him neglecting his work to chat with some companions who stood near. The

crowbar had not been driven far into the ground, on account of its rocky nature, and just as his head was about to disappear below the edge of the cliff, he happened to look up at it, and was horrified to see the rope running round its top instead of its bottom, and the whole thing so bent over by the leverage of his weight, that, instead of inclining away from him, it was pointing almost straight over his head. A frantic yell brought the careless rascal to his senses, or in another instant the crowbar would have been pulled out of the ground and the rope jerked from his hands. Some attendants have a reprehensible knack of trying to look over the cliff at the descending photographer whilst they manipulate the rope, which is by no means reassuring to the man below.

CARRION CROW'S NEST.

It has, however, its humorous side, for one day on the Irish coast my brother and a friend were caught by the tide and imprisoned in a cave they had stayed too long to investigate. My brother essayed an extremely difficult and dangerous climb to get out and procure assistance. When he had accomplished about half of his perilous task, he observed the end of a rope gliding down over the face of the cliff towards the mouth of the cave. The coachman, and an assistant whose services had been requisitioned for the day, had grasped the situation and were lowering the means of rescue.

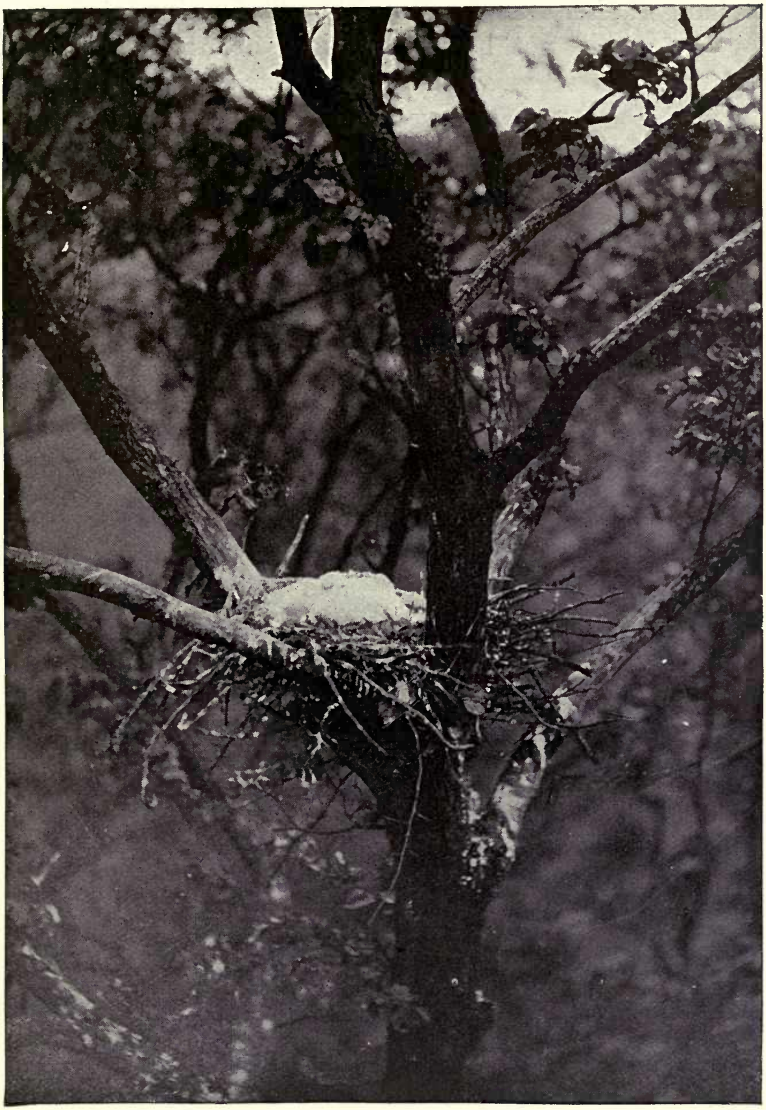
PHOTOGRAPHING A NEST IN A TREE.

When the end of the rope reached the prisoner in the cave, he was afraid to entrust himself to it, lest it should not be properly secured at the top. As soon as my brother reached the summit of the cliff, however, he found it twisted round a huge boulder of rock weighing many tons, and in addition held by eight stalwart Irish labourers, who had been called from their work to assist.

Nests built near the tops of high isolated trees are often very difficult to photograph, on account of the fact that they are situated amongst slender branches. That of the Carrion Crow comes under this category, as the bird loves a site which commands a good view of her surroundings in order that she may have early intimation of the approach of danger, and make good her escape. Another feature of this bird's nest is that it is extremely deep, thus preventing her eggs from rolling out when the structure is roughly swayed to and fro by a gale of wind, and at the same time necessitating the photographer, who would show them in a picture, getting well above it to make his study.

In the early part of March, 1896, we examined an old nest belonging to this species in an isolated tree growing in a meadow not far from where we live; and as the owner had begun to clean it out and repair it, amongst other things with green honeysuckle, and it was very awkwardly situated for photographic purposes, we removed it, thinking that the bird would go to another and more suitable tree in the neighbourhood.

Our molestation did not, however, interfere with her affection for the situation, and she speedily laid the foundation sticks of a new nest close by where the old one had stood. The third



SPARROW-HAWK'S NEST AND YOUNG

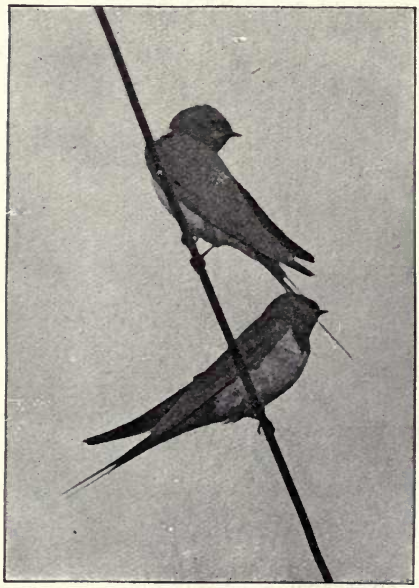
or fourth day after she had commenced this she changed her mind, probably discovering that the twigs would not bear the weight of her new home, and began to work at a fresh one a yard or two away upon stouter branches. In a very short time she had entirely used up the materials from the forsaken site, and a week after the completion of her last effort it contained four eggs, which we discovered by means of our bit of looking-glass on the end of a rod.

As we were anxious to make a photograph showing the eggs in the nest, and it was impossible to do so without fixing something up to enable us to get above it, we borrowed a twenty-foot ladder from a friendly farmer. It will be seen from the illustration on page 343—which is from a photograph kindly taken for us by our friend, Mr. J. H. Powell, of Balham—that the ladder is as nearly perpendicular as may be. This was the only position possible, because the branches to which we lashed it would have snapped like matches through the leverage produced by our combined weight if it had been placed at any angle. When the legs of the tripod had been lashed to the ladder, and the camera focussed, my brother's next difficulty was to get his dark slide in and the plate exposed without interfering with the precise adjustment of the apparatus. In order to accomplish these feats, he was obliged to hold on to one of the rungs of the ladder with his teeth and thus leave his hands free to work with.

Another difficulty now presented itself. The branches upon which the nest was resting, and the slender twigs around it, would not keep still, and, incredible as it may seem, each pulse-beat taking place in our bodies was distinctly indicated by them.

PHOTOGRAPHING A KINGFISHER'S NESTING HOLE IN A RIVER'S BANK.

In the case of a nest which can be photographed from a neighbouring tree, my brother ascends, and having selected a position from which he can get a good view, drops one end of a rope to me upon the ground, and I tie his apparatus to it. He then hauls it up, and lashing the tripod to the handiest branches, he makes his picture.

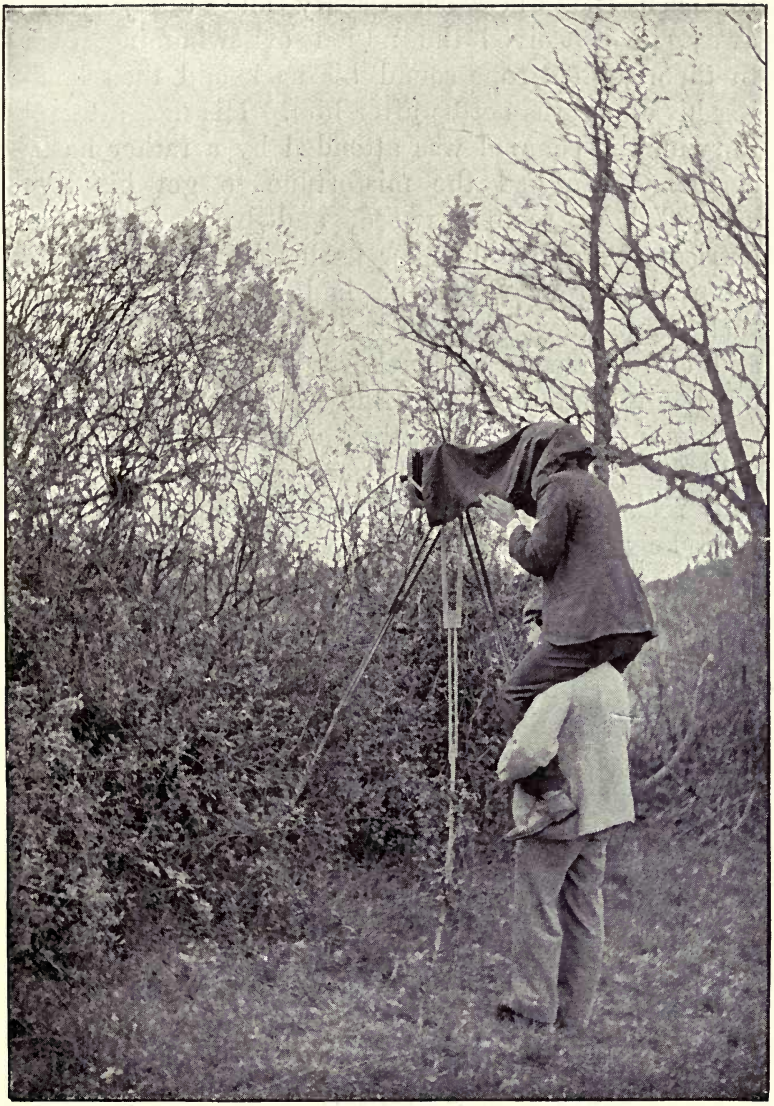


SWALLOWS ON TELEGRAPH WIRE.

The illustration on page 345 was obtained in this way, and the ascent nearly resulted in a serious accident, from the snapping of a rotten branch.

Once or twice we have met with nests far out upon a branch, and as they could not be photographed either from the tree in which they were situated or any surrounding ones, we have, with the assistance of several strong men, hoisted a tall ladder into a perpendicular position near the nest, and fixed it with guide ropes tied to adjoining trees. My brother has then mounted to the top, or as far up as was necessary, and done his work.

The group of Cormorants on page 251 was obtained in a rather curious manner. My brother and our friend, Mr. R. J. Ussher, an enthusiastic Irish ornithologist, were staying for a few days on the Saltee Islands already mentioned, and as



METHOD OF PHOTOGRAPHING BIRDS' NESTS SITUATED IN HIGH HEDGES.

they had no boat and the birds were breeding on a detached rock between twenty and thirty yards away, he conceived the notion of swimming over to them with a rope round his neck and then hauling his apparatus across after him. His first attempt to swim the channel was attended by a rather nasty accident. He had the misfortune to get his legs entangled in some seaweed, and before he could extricate himself a breaker hurled him back against the rocks, from which he had just started, with such force that he was badly bruised, scratched, and cut. In spite of his hurts, however, he struck out again, and eventually succeeded in reaching the Cormorants' crag, with the blood trickling down both legs, to the great alarm of his companion. The rocks on either side of the channel being a good height above the waves, enabled them to get the camera across on the rope without anything touching the water except the legs of the tripod.

The picture on page 348 of a pair of Swallows on a telegraph wire was obtained by rearing a long ladder against one of the interior walls of a lofty barn and putting the front of the camera through a ventilator. At the foot of the ladder a chained bull was praying all the while in a deep bass voice that some unlucky slip might deliver the photographer and his bit of mahogany and brass over to his untender mercies.

We have succeeded in making some very good photographs from boats, but such pictures require a good light and a rapid exposure, on account of the difficulty of keeping any craft in the water absolutely still. In the case of such nests or other objects as are photographically unapproachable except from a boat, and circumstances render a time exposure imperative, we take soundings of the

WATER VOLE.

depth of water between the vessel and the subject to be pictured, and then lash stout sticks of suitable length to the legs of the tripod and lower the whole overboard.

Where a boat cannot be requisitioned, and the stream or lake is not too deep, the photographer walks into the water and does his work, as shown

SPARROWS AND CHAFFINCHES ON THE SNOW.

in our illustration on page 347 of my brother in the act of picturing the nesting hole of a Kingfisher.

Many birds' nests situated in tall hedges and bushes give the photographer a great deal of trouble, on account of their elevation making it difficult to procure a good view of the eggs or young. We get over inconveniences of this kind by mounting the tripod on improvised stilts cut from any suitable sticks growing handy, and my brother focussing from my shoulders, as shown in the somewhat odd-looking illustration on page 349.

PHOTOGRAPHING KINGFISHER.

Such wild animals as Rabbits, Hedgehogs, and Voles require very patient waiting for, with the camera well hidden. We cover ours with a green focussing cloth, which has each of its four corners weighted with gunshot to prevent it from flapping in a breeze, and then hide the front with bushes, taking care, however, that no drooping leaf stands a chance of interposing itself between the lens and the object to be photographed. My brother then lies up at a convenient distance with the binoculars, and waits until the object he desires to photograph comes within the field of focus, and exposes his plate by a squeeze of the air-ball at the end of the pneumatic tube controlling his silent shutter.

Birds on their nests feeding their young, and at rest in their natural haunts, are photographed in a similar manner.

The great secret of all field work is the power to keep absolutely still for a prolonged period of time. I have stood like a statue in a perfectly exposed place beside a small cattle pond for half an hour on a calm summer's evening, and had five Rabbits, four Voles, and two or three common Brown Rats within a dozen yards of me fighting, feeding, swimming, and playing with the utmost unconcern, until I stirred, when they all disappeared as if by magic. My brother waited a whole day for the picture of the Vole on page 351, and so confiding did the little animal become towards evening that it hopped up to him and smelt his boots, and even hid itself beneath his legs, as he sat with his knees drawn up in a high clump of thistles, upon the approach of a man who happened to be passing the pond in the banks of which it lived. Most birds are as frightened of the Cyclops-looking lens of a camera as they are of a human

being, and it is only its absolute stillness that reassures them. I have seen many a one hop close round the back of our hidden apparatus a long while before it dared go to its nest, with the awful eye on it in front.

When snow is on the ground in winter, we feed the birds in our garden, and then photograph them with the apparatus hidden beneath the ample folds of a white sheet or large table cloth.

Last winter, when all the streams in Surrey were swollen and muddy, a Kingfisher found its way almost daily into a garden belonging to a friend of ours living in the neighbourhood of Redhill, and containing a pond in which a number of goldfish were kept. The bird used to come and sit on a little ash sapling sprouting from the left hand bank of the pond, as seen from our friend's house, or upon the trailing boughs of a tree overhanging the right bank, and, whenever a fish swam within its ken, it made a swift downward plunge into the water, and, securing its prey, flew with it to one or the other of its favourite perches. The unfortunate victim quickly received its quietus by a few vigorous blows on the branch, and was then swallowed head foremost.

Hearing of the bird's visits, my brother was very anxious to try to photograph it, and a resourceful friend of ours cut a round hole in the side of a large wooden box, which he placed on a gravel path some distance from the ash sapling, moving it a little closer each day, in order that by degrees the bird might get accustomed to its presence. He next fixed an old door up in such a position as to hide from the Kingfisher the approach of anyone leaving a French window at the end of the house, and carpeted the gravel path

thickly with old sacks, so that the bird might not hear the crunching of the photographer's feet upon it when he approached.

My brother went down, and, placing his camera in the box, focussed the favourite twig through the hole our friend had cut, brought his pneumatic tubing behind the door, and retired to wait in our friend's sitting-room, which commanded a good view of the pond. As the bird only came three or four times a day, and did not stay long on any occasion, no opportunities were to be lost, and while photographic light lasted he kept constant watch, even having some of his meals brought to him, for fear of missing a chance. Six days spent more or less in patient waiting and watching resulted in his obtaining a series of studies, one of which is reproduced on the opposite page.

We have suffered a few minor accidents resulting in sundry bumps and sore bones, and the smashing of our apparatus, but nothing of a serious character.

On one occasion my brother reared a ladder against the trunk of a tree which was too thick to swarm, with the idea of getting amongst the branches by its aid. He had nearly reached the top, when one side of the contrivance suddenly snapped with a loud crack about a yard from its upper end, and three or four rungs flew high in the air as if cast by a juggler. The climber's head came in violent contact with the tree, and, losing his footing and balance at the same time, he spun half round and fell, but in passing what remained of the ladder he snatched at it from beneath, and, arresting his descent, swung himself back again, and thus, by a gymnastic feat, averted what might have proved a nasty accident.

KINGFISHER.

Last spring we were trying to photograph a Wild Duck sitting on her nest in a steep bank leading down to a pond eight feet deep. She could only be approached from the front, so we procured a couple of wooden trestles and a long ladder, and interlocking the former, pushed them out beneath the latter. My brother then walked along the ladder, and with the assistance of sundry sticks managed to fix up his camera. Just as he was about to make a picture, the trestles slipped, and photographer and camera fell with a tremendous splash into the pond, and the startled Duck flew away in a hurry.

One of the great difficulties connected with natural history photography is the recharging of dark slides, and we have more than once had a valuable batch of plates fogged in doing so by means of a changing bag. At the outset of my brother's photographic career, he one day, whilst on the moors in North Yorkshire, conceived the idea of crawling far enough up a disused lead-mine to meet with darkness sufficiently dense for his purpose, as he had forgotten his changing bag. Just as he was congratulating himself upon having reached a point suitable for his purpose, he fell head over heels into an old shaft full of icy cold water.

We have essayed the portrayal of winged insects at work and play, but found it an even more difficult and tedious task than that of making photographic studies of wild birds and beasts in their native haunts. One sunny day, whilst out hunting for subjects for the camera on a friend's farm, we discovered a couple of large Dragon-flies floating backwards and forwards across a cattle pond. We watched their airy swingings to and

fro for a while, and noticed that one of them, after an angry collision with its neighbour, invariably alighted upon a favourite grass stem. My brother waded into the pond and focussed it, but the insect immediately took a fancy to another a few feet away, and constantly patronised it instead of the one originally used as a resting-place. The camera was shifted, but we soon discovered that when the Dragon-fly alighted upon the slender grass stem, it bent sufficiently with the weight to take the insect out of focus. After half a day's patient work, however, we succeeded in making a successful picture.

On another occasion we were shown a Wasps' nest suspended under an overhanging bank. My brother fixed up his camera at a respectful distance and took a photograph with some of its occupants walking over it. Anxious to make a study at closer quarters, he crept stealthily up, focussed, inserted a dark slide, and was just about to expose a plate, when by an unlucky accident he touched a rootlet, which made the nest vibrate, and out poured an angry crowd of insects upon him, and he was obliged to beat a very hasty retreat minus his camera.

A year or two ago I read an account of a Golden-crested Wren having been caught in a Spider's web, but must confess that I doubted the ability of any creature of this kind in the British Isles to make a web strong enough to hold even our smallest bird.

Last year I caught a member of the species represented in the picture on the next page, and kept him under a glass globe for some weeks. He made a web right across it, and I cut a piece of cardboard exactly an inch square and, inserting it

so that it caught the web flat, I then attached a spring balance and began to pull steadily. To my great surprise, although it was only fixed to the smooth glass on either side and had a span of ten inches, it sustained a strain of over four ounces, avoirdupois, before giving way.

SPIDER'S SNARE.

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